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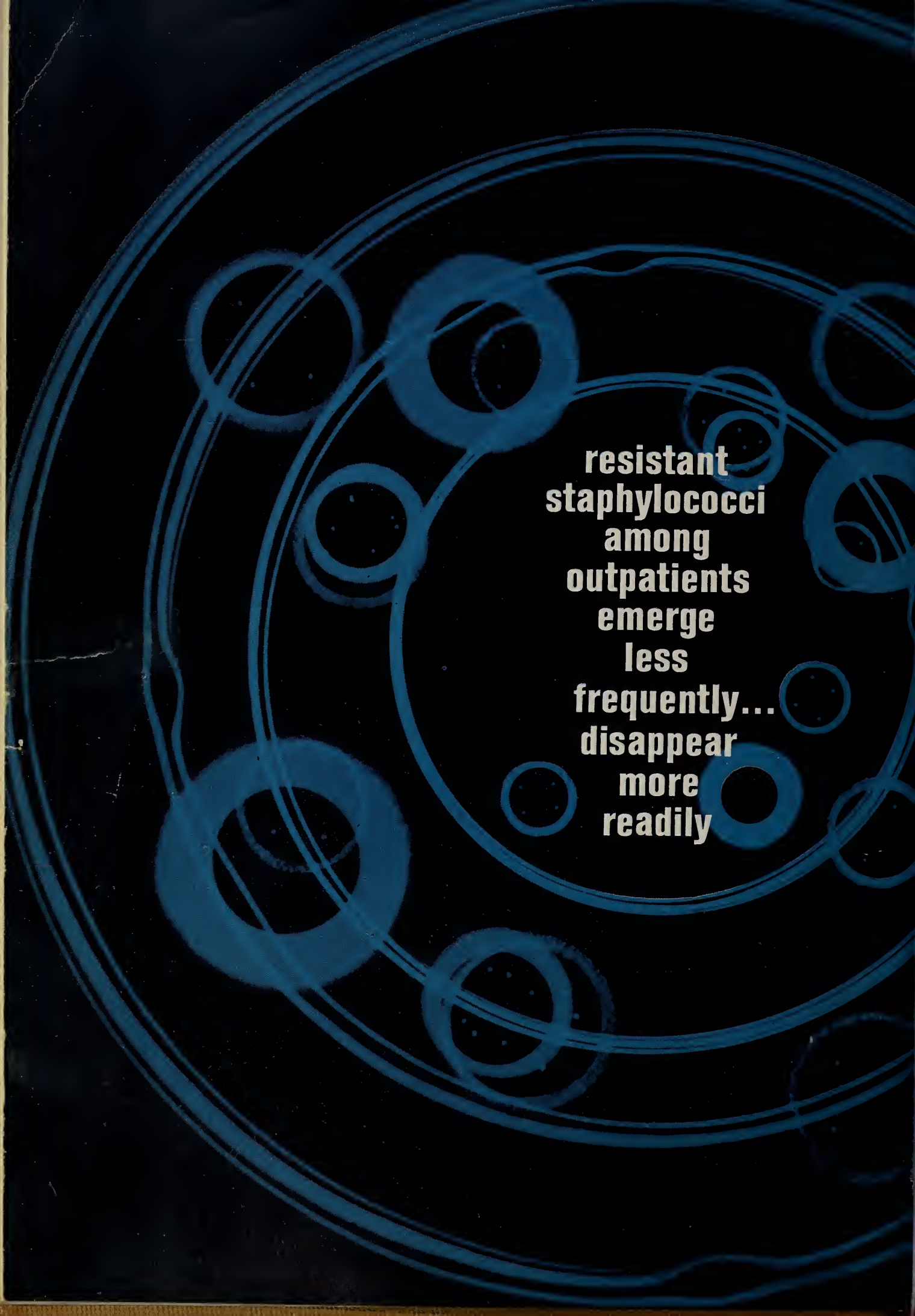
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the JOURNAL

OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

THE SERIOUS SOLONS OF '61




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JANUARY 1961

Volume 54 Number 1

Journal

OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

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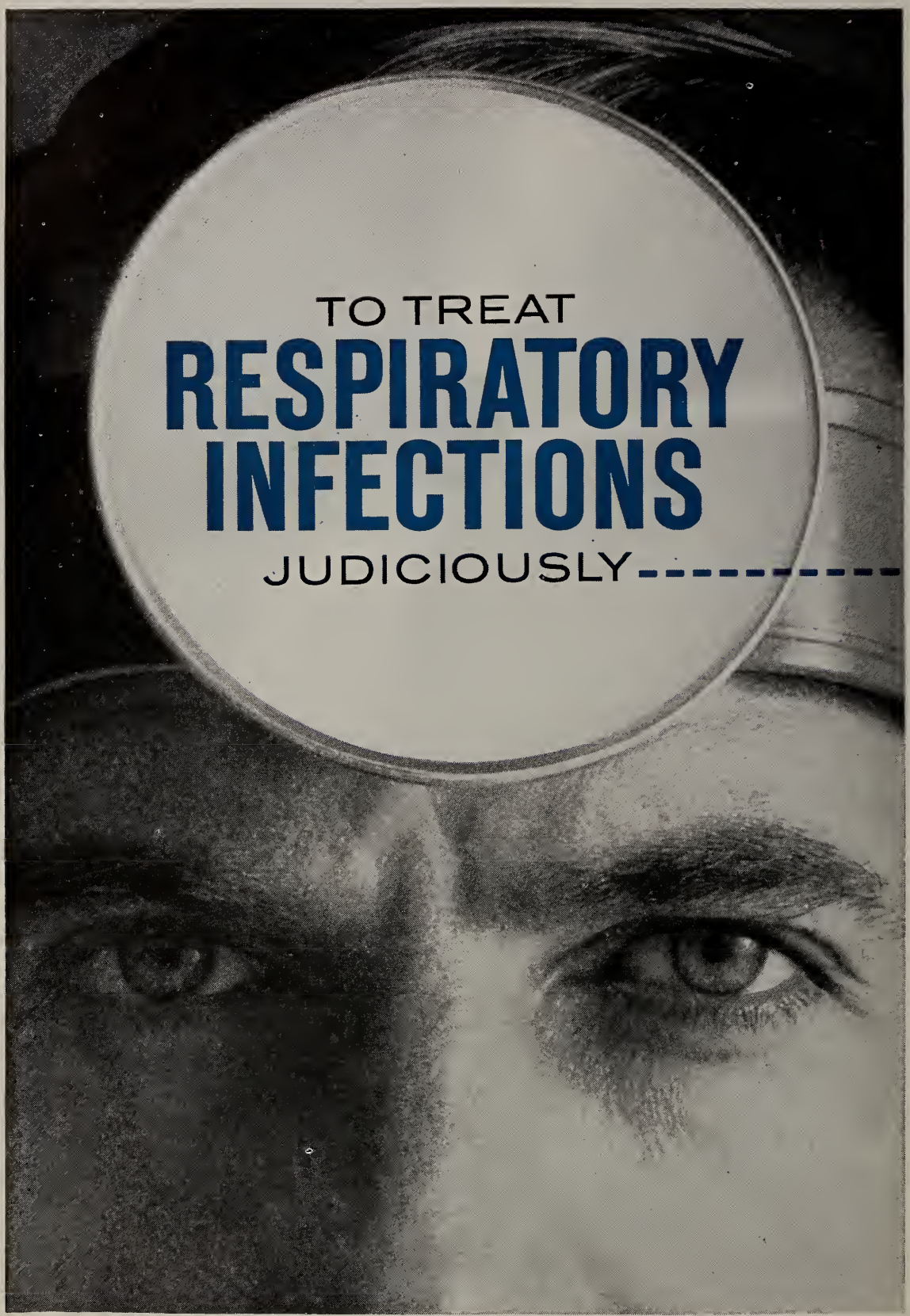
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Editorial

Recruitment of Medical Students For the University of Oklahoma School of Medicine

The N.C.A.A. has the University of Oklahoma football team under indefinite probation for alleged "overactivity" in recruitment. I feel sure that Dean Everett and the Admissions Committee wish that someone could make such an accusation against the practicing physicians of Oklahoma and for more definite reasons. The fact is that the Medical School is in rather desperate need for an adequate number of qualified applicants to fill the available positions in the freshman class each year. As practicing physicians in this state it would be to our never ending embarrassment and shame if the caliber of medical practice in this state were to decline simply because too few bright young men are stimulated to enter the practice of medicine. If such a circumstance were to occur, it would reflect on us because we are all a part of the practice of medicine in Oklahoma, whether young or old, alumni or not. We have a vested interest in the Medical School and in medical practice, and we have a moral obligation to help the Medical School recruit students of high quality.

There are apparently two major factors which are deterring students from the study of medicine: (1) the relatively high cost of such education as compared to other fields and (2) vigorous recruitment programs carried on by government, science and industry to interest our young people in various other scientific studies.

It is true that attending Medical School is expensive. However, the cost is not prohibitive. Many young men in attendance now and in the past can testify that it can be accomplished on very little money. Where there is a will, there is a way. However, the curriculum of the medical school is difficult, and many reasonably qualified young men cannot earn their way and make satisfactory academic progress also. They are going to need financial help. Industry is pouring millions of dollars into subsidies for science students, but little or none for medical students. In the last analysis, creation of a loan fund for medical students is probably going to rest upon the medical profession. If we do not help to solve the problem of financial aid to medical students, ultimately it will probably be handled by some form of governmental subsidy. This could ultimately have rather tragic implications for the freedom in the practice of medicine. Personally, I think we should be proud and willing to shoulder the load of establishing a loan fund. There are about 1500 active members in the Oklahoma State Medical Association. Most of these men could well afford a contribution of $100 a year to a student loan fund. Many practitioners could afford much more. In a few years a fund of over a million dollars could be built up. This could be invested with relative ease at 4½ to 5%. Such an investment would create a fund $45,000 to $50,000 a year to be available for loans to qualified students. As the students graduated and entered practice, they should start to repay the loans (with small interest), and the amount of money available for loans would increase rapidly. In fifteen to twenty

THE COVER

The Oklahoma lawmakers who took the oath of office on January 3 are in a pickle. They face a budgetary problem involving some $50 million more in expenditures than they have in income.

Taxes must be raised or the state's standard of living lowered; neither will be popular with large segments of the citizenry.

Some of that $900 million in Federal taxes that went to Washington last year would come in handy now. Is something out of kilter in the balance between state and federal taxes?

years the amount available would virtually assure that no deserving person would be denied a medical education because of the lack of finances.

Doctor John Hale, University of Oklahoma Medical School, has done a good job of working out many of the details for handling and developing such a fund.

Active recruitment is the second area in which we could help. I feel the attack on recruitment should be double barrelled, eminating from the Medical School and from private physicians. The Medical School could work wonders by sending speakers to various colleges throughout the state. They should explain the requirements for admission, the availability of loan funds, and most of all, they should demonstrate an enthusiasm for having these young men come to our Medical School. When one compares the minimal amount of recruiting activity that is done by our medical institution to that which is done by industry, it is little wonder that sometimes the students in colleges feel that we really have no interest in having them attend medical school.

In addition to the activity of the medical school in this respect, the practicing physician has an excellent opportunity to make a wonderful contribution to stimulate young people to study medicine. The practitioner is a living advertisement for the study of medicine. We must all take the necessary time to talk with prospective students, explaining the practice of medicine to them. We should attend and speak at the high school career day programs. Most of all, we should demonstrate reasonable pride in being physicians. This would be one of the most influential factors in interesting young people in our career.—*H.T.R.*

Good News!

It is reported that the School of Nursing at the University Medical Center this year will enroll more than 30 students into their nursing degree program. This is truly good news for it foretells better days are ahead for the practice of medicine in hospitals.

It is not so much that hospitals lack working personnel for bedside nursing—most hospitals employ more than enough inexpert help, aids, orderlies, practical nurses, for this purpose; but more that it is difficult to find capable well-trained and educated nurses to instruct and supervise these individuals into better methods of nursing practice.

The degree program in nursing will supply this need and if generally expanded would soon solve the nursing shortage. Hospitals administrators know that one intelligent, well-motivated, well-educated professional nurse is worth a dozen of a lesser trained type of hospital nursing personnel. Unfortunately, the professional nurse today has been so overburdened with supervisory responsibilities and duties for which she is often neither well-prepared nor temperamentally suited, that few graduate nurses find time to give proper instruction and supervision to personnel under their charge.

This is the main reason why the degree program in nursing will eventually supplant the present day diploma school curriculum. The diploma schools will convert to the training of a better type practical nurse. However, the change-over to a more comprehensive program for nursing education will be slow for it is not simple to integrate the diploma curriculum into a college or university schedule. Yet, like medicine which has steadily raised its educational standards, the nursing profession will accomplish the same objective through the degree program for their graduates.

At the present Oklahoma City has two degree nursing programs—one at the Medical Center affiliated with the University at Norman, and the other at Wesley Hospital sponsored by the Oklahoma Baptist University in Shawnee. Both schools are well integrated into the college program; their graduates are prepared not only with an excellent liberal art educational foundation but they also receive superior training in the practical nursing arts. Both schools are models of what the future nursing school will become.

The medical profession should encourage this type of program for nursing education; it is a step forward to a better kind of health service.—*D.W.B.*

Scientific Articles

The ultimate diagnosis in this instructive case was at first obscured by the unusualness of the presenting symptom.

Porphyrinuria: A Presenting Symptom of Infectious Mononucleosis

J. NEILL LYSAUGHT, M.D.*

Since graduating from the University of Kansas School of Medicine in 1944, J. Neill Lysaught, M.D., has been certified by the American Board of Pediatrics.

In addition to his private practice in Oklahoma City, Doctor Lysaught is Assistant Professor of Pediatrics at the University of Oklahoma School of Medicine and a Fellow of the American Academy of Pediatrics.

THE PORPHYRINS are a group of pigments widely distributed in many animal and plant tissues. In their metabolism, the liver serves in many ways: It may destroy or transform amounts of these pigments which may be toxic to the human organism and at the same time excrete them via the bile; it may regulate both the level and rate of passage of porphyrins from the portal to the general circulation, whence these pigments arrive at the kidneys for elimination or are deposited in the skeletal system.

The fact that hepatic lesions lead to an increased urinary coproporphyrin elimination has been known since 1892.[1] This increase in coproporphyrinuria has been described in malignant hepatic metastases,[2] cirrhosis,[3] infectious hepatitis,[3] mechanical jaundice, acute yellow atrophy,[3] luetic cirrhosis, poliomyelitis,[4] and infectious mononucleosis.[2]

Case Report

J. F. DeA, 16 year old white male, was admitted to Wesley Hospital, Oklahoma City, Oklahoma, 7-23-60, with chief complaints of fever and back pain for two weeks. At that time he had developed fever ranging up to 104 degrees, some chills and vague aching of the back. He had had malaise and anorexia during this two week period. About one week prior to admission this patient noticed that his urine was darker than usual. He stated that it was clear on immediate exit from the penis, but by the time the urine hit the urinal it was dark brown to yellow in color. He denied episodes of acute abdominal pain, but complained of intermittent upper abdominal pain of moderate severity; he denied polyuria, dysuria or nocturia. He had had no known exposure to infectious mononucleosis or infectious hepatitis. He denied jaundice or change in stool color. He denied any family history of similar episodes, history of dark urine or family history

*Department of Pediatrics, Oklahoma City Clinic-Wesley Hospital, Oklahoma City, Oklahoma.

of insanity or mental deficiency. He had been severely constipated since the onset of his illness. There was no history of any injection of foreign protein or serum.

Past history revealed several episodes of acute right pyelonephritis, the last bout of which occurred a year prior to admission.

Physical examination revealed a well developed, muscular, white male who had obviously lost considerable weight and appeared acutely and chronically ill. Weight was 136½ lbs., pulse 96, respirations 20, blood pressure 110/50, temperature 104°. Examination of the head, eyes, ears, nose and throat was negative. There were bilateral half-centimeter nodes palpable in the cervical area and half-centimeter nodes in both axillae. The chest was clear to auscultation and percussion. Examination of the heart showed regular sinus rhythm without murmurs. There was no cardiomegaly. Examination of the abdomen showed the liver edge to be three centimeters below the right costal margin. The liver edge was sharp; there was no unusual tenderness to palpation or percussion of the liver. The spleen tip was felt just at the left costal margin. There were no other abdominal masses noted. Examination of the skin revealed a one centimeter circular, erythematous, blanchable rash consisting of two lesions on the left shoulder. The following laboratory studies were carried out:

X-ray of the chest showed no infiltrate. I. V. Pyelogram showed only splenomegaly with a contracting right pyelonephritis. The total serum protein was 5.96 grams per cent with 2.77 grams of albumin, 3.19 grams of globulin with a partition of 1.9 gamma globulin, .65 beta globulin, .41 alpha 2 and .23 alpha 1. Admission urinalysis was positive for porphyrins and negative for porphobilinogen and bile, with occasional white cells found in the urine. The urine was dark. Admission blood count showed normal levels for hemoglobin and hematocrit, with a white count of 17,300 cells, 19 per cent filamented, 4 per cent non-filamented, 74 per cent lymphocytes, of which 50 per cent were atypical cells suggestive of infectious mononucleosis. Smears of the peripheral blood, read by Doctor T. E. Clemens, Jr., showed many cells resembling Downey cells. On 7-25-60 the porphobilinogen was again negative in the urine and porphyrins were again positive. The VDRL was non-reactive. Urea nitrogen was 14 milligrams per cent. The bilirubin was .75 milligrams per cent. On this date the total protein was 5.96 grams with 3.04 albumin and 2.92 globulin. Bromsulfalein retention was 31.5 per cent in 30 minutes, the thymol turbidity was 12.4 units, the alkaline phosphatase was 8.8 units, and the transaminase (SGOT) 70 units. The heterophile on 7-23-60 was positive through 1:3584, and on 7-25-60 was positive through 1:7168. The cephalin flocculation was 4+. The boy gradually quit excreting porphyrins in his urine. His hospital course was markedly febrile for four days. All skin tests including histoplasmin and tuberculin, were negative. The urine turned quite dark on exposure to sunlight outdoors during the first few days of hospitalization. Malaise, anorexia and fever dominated his course. A very severe sore throat with exudate over the pharynx appeared on the third hospital day. Treatment was symptomatic. The spleen continued to enlarge to a level of 5 centimeters below the left costal margin on the fourth hospital day. He became afebrile after the fifth hospital day and was discharged home on bed rest and gradually increasing activity. Final Diagnosis: Infectious mononucleosis with porphyrinuria.

Follow-up examinations during each of which he was asymptomatic were as follows:

On August 5, 1960 his weight was 129¾ lbs. His cephalin flocculation was 4+, thymol turbidity was 16.3 units. On August 15, 1960 his weight was 134 lbs. His urinalysis was faintly positive for porphyrins. Thymol turbidity was 15.4 units, cephalin flocculation was 3+. On September 1, 1960 his weight was 138½ lbs. His thymol turbidity was 11.1. On October 5, 1960 his weight was 140¾ lbs., and all liver functions had returned to normal. He had developed a moderately severe alopecia of undetermined origin.

Discussion

It is of interest that the symptoms and signs of extreme urinary porphyrin excretion preceded the development of the picture

of infectious mononucleosis as it is commonly seen.

In the human, the feces ordinarily contain porphyrins regularly and in amounts which vary widely according to diet, (including preformed porphyrins in ingested food), exercise, and amounts of endogenous pigments containing a chlorophyll or hematin base, which in the small intestine and perhaps the upper colon are made into porphyrins. Most of this fecal porphyrin comes from breakdown of the hemoglobin, myoglobin and chlorophyll groups in the intestine.

Porphyrins also enter the gut through the biliary tract at the rate of about 300-600 micrograms/day. Of this, part is reabsorbed in the intestine and returns to the liver, where again part is returned to the blood and thence presented to the kidneys for excretion and the rest returns to the intestine via the biliary tract.

It is thought that the renal elimination of porphyrins takes place at the level of the convoluted tubules. The average adult excretion of porphyrins (Coproporphyrins I and III) in the urine is about at the level of 60-300 micrograms per 24 hours.[5] The partition percentage between the two types of coproporphyrins varies widely.

This increase in the urinary coproporphyrins is not due to overproduction but to diversion of that which ordinarily would be excreted in the bile and thence the feces, and is probably due to hepatocellular inability to handle the increased load of porphyrin presented for excretion. This is provable since the urinary coproporphyrin excretion never exceeds the amount passed in the feces per 24 hours.

In most disease states associated with porphyrinuria, the latter finding is incidental. It is unusual except in those porphyrinurias due to specific defect in porphyrin metabolism for the recognition of porphyrinuria to precede the clinical diagnosis. For this reason, the case reported is considered instructive.

Summary

A case of infectious mononucleosis with severe porphyrinuria is presented. Some general remarks about porphyrin metabolism are made.

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MEDICS IN DEFENSE



Medical Supplies

Nationwide surveys now being conducted by the Federal Government indicate that about 50% of all expendable medical supplies are actually physically located in the plant of the manufacturers. Only about 10% of the total is located in warehouses spread throughout the country. About 2% is held as a federal "stockpile." Another 10% will be found in the hands of retailers including drugstores, pharmacies, super-markets with drug counters, and medical supply houses.

There are no major drug manufacturers in the five state area of New Mexico, Texas, Arkansas, Louisiana and Oklahoma. Following a mass thermonuclear attack on the Continental United States, it is contemplated that families should be self-sustaining for about two weeks, and communities should be self-sufficient for another four weeks. It would behoove all physicians to increase the level of supply in their offices, to keep an additional supply of commonly used drugs, medicines and dressings at their home, and to encourage their hospitals to increase the level of supply to approximately six weeks.

Serum Lipase Variations Following Fat Challenge

A Preliminary Report*

DeWITT T. HUNTER, JR., M.D.
JOHN J. DONNELL, M.D.

DeWitt T. Hunter, Jr., M.D., graduated from the University of Maryland School of Medicine in 1952 and has since been certified by the American Board of Anatomic and Clinical Pathology.

Doctor Hunter is a member of the American Society of Clinical Pathology and the College of American Pathologists.

In 1943, John J. Donnell, M.D., graduated from the University of Oklahoma School of Medicine. He is certified by the American Board of Internal Medicine and the American Board of Cardiovascular Disease.

Doctor Donnell is a Fellow of the American College of Physicians, the Oklahoma Clinical Society, the American Heart Association and the Oklahoma Internists Association.

IT SEEMS PROBABLE that lipase plays a dual role in lipid metabolism. As one of the major exocrine products of the pancreas, it splits exogenous neutral fats into glycerides, fatty acids and glycerol in the gastrointestinal tract;[1] as an endocrine substance it accomplishes the same function in the blood stream and tissues. If the assumption is correct that the serum lipase component is in equilibrium with the rate of pancreatic production, logically, the serum level should rise when the pancreas is stimulated to secrete. This study is calculated to explore this possibility.

Materials, Methods and Results

Normal individuals and persons afflicted with certain disease processes were subjected to a battery of tests including total serum lipids, total serum cholesterol and beta and alpha lipoprotein fractionations. Serum lipase levels were determined before and after challenge with fat. Selected individuals were tested for thyroid function, blood glucose and fat absorption. Total lipids were performed in accordance with the procedure of Kunkel.[2] Total cholesterols were done by the method of Pearson, et al.[3] Beta/alpha lipoprotein ratios were determined by the modified method of Moinat, et al.[4] Gomari's modified technic for serum lipase was performed.[5] The thyroid was evaluated by the radioactive L-triiodothyronine method of Homolsky, et al.[6] Fat absorptive studies were performed by the I-131 labelled neutral fat method of Ruffin, et al.[7] Normal subjects consisted of asymptomatic physicians, their families, and laboratory personnel. Abnormals were selected on the basis of their clinical signs, symptoms and laboratory data indicative of degenerative coronary vascular disease. One mildly hypothyroid subject and one markedly achlorhydric subject were included in the study. The total lipid, cholesterol and lipoprotein fractionation proce-

*From the Departments of Pathology and Cardiology, Baptist Memorial Hospital, Oklahoma City, Oklahoma.

Patient No.	Total Lipid	Cholesterol	B/A Ratio Lipoprotein	Lipase Fasting	60 min.	% Change	Remarks
NORM	500-900 mg%	150-300 mg%	1.5-4.0	50-150			
1.	520	250	10.0	49	60	+22	Asymptomatic
2.	744	282	8.7	33	54	+64	"
3.	886	213		533	114	—79	" Turbid serum
4.	418	178	3.0	111	143	+29	" T3-18.30%
5.	778	312	6.5	79	155	+96	"
6.	760	270	8.0	94	89	— 5	"
7.	704	242	7.5	60	70	+17	"
8.	820	330	4.5	100	155	+55	"
9.	666	172	4.0	65	85	+31	" Normal Fat Abosrp.
10.	599	226	8.2	183	246	+35	T3- 14.75%
11.	748	290	3.2	163	184	+12	" T3- 13.42%
	695	252.0	6.1			+25	
12.	776	260	2.0	56	74	+32	Angina
13.	640	222	3.0	132	80	—40	Angina
14.	868	260	7.2	71	72	+ 1	Angina
15.	473	210		120	78	—35	Angina
16.	928	234		115	203	+76	Angina
17.	800	230	4.6	70	72	+ 2	Angina
18.	1252	410	7.7	104	45	—57	Angina
19.	958	259	8.0	82	52	—37	Angina
20.	544	255	9.0	80	44	—45	Angina Diabetes
21.	960	204	7.6	268	143	—47	Angina T3-11.90%
	820	254.4	6.3			—15	
22.	506	210	7.3	30	82	+173	? Coronary insufficiency
23.	632	423	8.1	15	24	+60	? Coronary insufficiency
24.	475	180	6.3	51	29	—23	Hypometabolism T3- 7.0%
25.	550	157	6.7	55	20	—157	Achlorhydria. Flat triolein curve

Table I. Tabulation of Laboratory Results

dures were performed on fasting specimens; thirty minute and sixty minute specimens were similarly processed in several instances and found to vary insignificantly from the fasting specimens. Lipase determinations were performed on all fasting specimens and on all 60 minute specimens. Some subjects will peak before 60 minutes and some will peak after 60 minutes. In the interests of standardization, the sixty minute analysis for lipase became routine. The fat challenge consisted of 16 to 32 grams of fat in the form of cream. The results are tabulated in table I.

Although subject #3 was categorized as normal, this individual showed moderate lactescence in his fasting specimen. This lactescence and elevated lipids strongly suggest that a lipid diathesis might well be present. Those persons classified as having coronary artery disease had in most instances been rather vigorously treated with low fat diets, heparin and in some instances estrogens. This therapy was no doubt effective in returning the lipid levels to approximately normal. Subject #20 in addition to coronary disease had diabetes. Most of these persons had a lowered threshold for angina postprandially. Two persons with clinical pictures only suggestive of coronary atherosclerosis showed normal lipase response.

Discussion

The above observations allow for several areas of conjecture. Normally fat ingestion appears to be followed by an increase in serum lipase. Two features of this stimulation are remarkable: (1) small amounts of lipid accomplish this and (2) the effect is quite abrupt. The stimulation of the pancreas must be through routes other than the

secretin system. Perhaps lipid ingestion acts immediately to initiate lipase production *within* the pancreas while the secretin system effects *delayed* secretion of lipase into the duodenum. Most persons in this series with coronary artery disease (and very likely arterial disease elsewhere) show depression of serum lipase following fat ingestion. One case each of atrophic gastritis and decreased metabolism also showed this striking decrease.

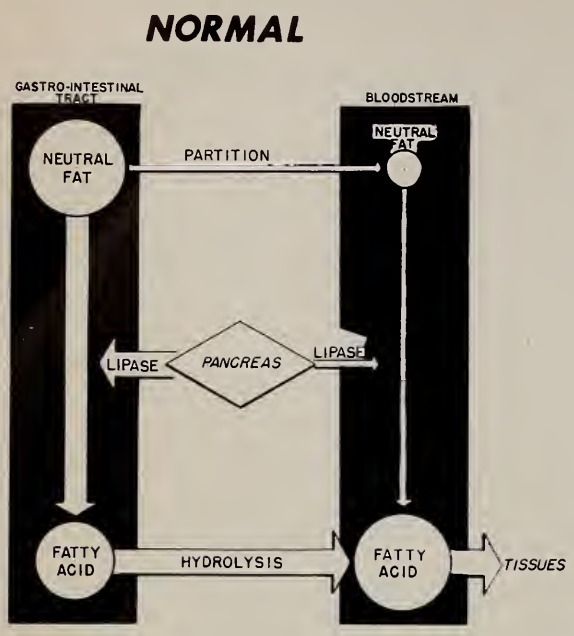


Figure 1. This greatly simplified diagram shows how fat is normally split within the intestine, absorbed as fatty acids, and rapidly removed from the blood stream. The small quantity of fat absorbed in its neutral state is rapidly converted in the blood stream to fatty acids. Normally marked and sustained hyperlipemia is averted through this efficient intestinal and systemic breakdown of neutral fats.

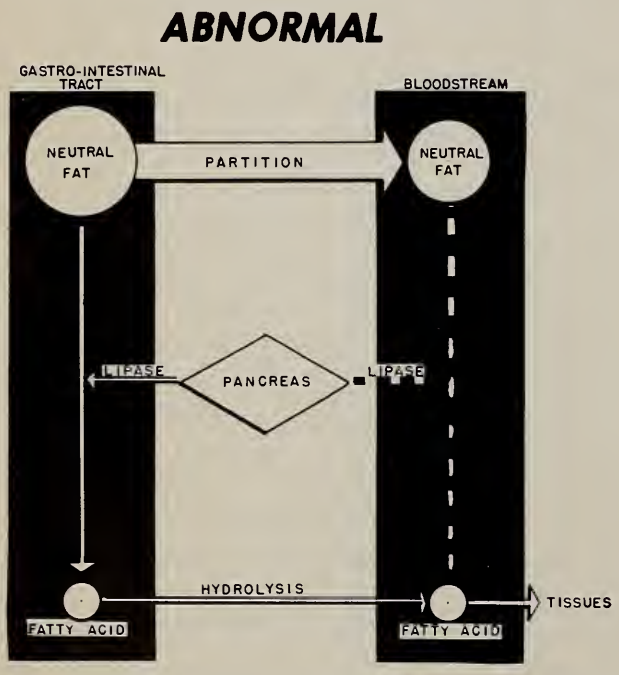


Figure 2. When lipase is inactive or deficient, neutral fat will be absorbed in quantity. This neutral fat will result in high and sustained hyperlipemia and lactescent serum. The early depletion of lipase from the serum may contribute to this delayed clearing.

A drop in serum lipase in these conditions may be due either to decreased release of lipase into the blood stream or to rapid utilization and/or loss from the blood stream. Probably, both of these mechanisms are contributory. The important question is the possible effect this faulty mechanism may have on fat metabolism.

If intestinal pancreatic lipase is deficient or inactivated, absorption of neutral fat rather than fatty acid will result. When fat is absorbed in its neutral state via lymphatics, postpradinal turbidity will be encountered. If, however, complete degradation of fat occurs, turbidity may not result. Neutral fat absorption is termed partition, whereas, fatty acid absorption is referred to as hydrolytic absorption.[8]

Little is known of the role of serum lipase in systemic lipid metabolism. Serum lipase analysis has received little clinical attention except as an adjunct in the diagnosis of pancreatic disease.[9] In acute destructive processes of the pancreas, elevations will be found in excess of 200 units and these elevations will be sustained for several days longer than concomitant rises in amylase. Low values of serum lipase are seen in instances of pancreatic ablation.

Whether the active agent in the lipemic clearing factor is lipase or a similar substance is not clear. The clearing factor may be represented by:

$$\text{Alpha globulin} \xrightarrow[\text{heparin}]{\text{tissue factor}} \text{clearing factor}^{10}$$

(alpha globulin is the transport protein of lipase)

The clearing factor exerts many effects on lipoprotein, one of the more important being:

$$\text{Neutral fats} \xrightarrow[\text{coprotein}]{\text{clearing factor}} \text{fatty acids} + \text{glycerol}^{11} \quad (\text{half life 2 minutes})^{12}$$

Although conclusive evidence is lacking, it would appear that lipase plays a role in

the prevention of hyperlipemia through the clearing factor mechanism. The sensitivity of the serum lipase response to fat ingestion, temporally and quantitatively, suggests that it is a very basic and specific mechanism in homeostasis, comparable to the glucose-insulin relationship. It suggests that the high sustained postprandial lipemia seen in arteriosclerotic patients[13] may be due to a serum lipase deficiency.

From this study the following facts emerge: (1) individual fasting serum lipase levels vary over wider limits than previously suspected (30 to 533 units vs. previous normal values of 50 to 150 units); (2) the immediate effect of fat ingestion on serum lipase is quite marked (+173% to —157% change). No other serum component shows this hyperactive fluctuation. (3) Normal subjects will usually have a significant elevation in serum lipase following ingestion of small amount of fat (mean +25%); (4) some subjects with hypometabolism, atrophic gastritis, hyperlipemia (with lipemic serum), diabetes and degenerative vascular disease will have significant decreases in serum lipase following fat challenge (mean —15%); (5) the correlation between serum lipase change following fat ingestion and arteriosclerosis is greater than the correlation seen in other means of analyses now in use.

Although this primary work gives rise to more questions than answers, it is possible that further work in this area may contribute knowledge toward the cause and prevention of arteriosclerosis.

Summary

Reciprocal fluctuations of serum lipase in health and disease are observed following fat challenge. The possible significance of this previously undescribed phenomena in disarrayed lipid metabolism is discussed.

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MEDICS IN DEFENSE



First Aid Kits

Metal first aid kits are available from several different manufacturers in various sizes and configurations. There are some very nice ones available with waterproof seal. Every physician should have one of these first aid kits in his home and perhaps another one in his automobile.

As these kits were designed for the general public, they usually do not contain narcotics and surgical instruments. By simple addition of some hemostats, scissors, suture and two or three doses of narcotics, these commercial kits can be made much more practical for the doctor.

First aid kits make an ideal and appreciated gift to your friends, for prizes and favors at hospital and medical parties and meetings, and could be life saving in Civil Defense emergency.

Acute Bromide Intoxication

Report of a Case

JAMES W. WILSON, M.D.

BROMIDE INTOXICATION is not too frequently reported although the consumption of bromides in proprietary compounds amounts to a considerable quantity. A highly advertised "nerve tonic" is largely composed of bromide compounds.

W. B. is a 59 year old white, diabetic barber with a past history of excessive alcoholic intake on occasion. He first presented himself for treatment complaining of joint pains and headache. It was impossible to elicit further history because the patient had violent mood swings and had difficulty following one train of thought. He alternated between complete cooperation, and marked hostility. Physical examination revealed a well-developed and nourished, markedly dehydrated, white male who was ataxic and confused, but was oriented as to time, place and person. He denied the consumption of alcohol or narcotics, and his breath did not have the characteristic acetone odor of diabetic acidosis. The remainder of the physical examination was entirely unremarkable except for the finding of 2+ pedal edema.

The patient was hospitalized with the diagnosis of possible diabetic acidosis. The urine contained a trace of acetone but no sugar. Blood sugar was 140 mg per cent. A complete blood count was within normal limits.

As the patient was being put to bed he was observed to take a drink from an unmarked medicine bottle containing a brown liquid. This was taken from him and given to the attending physician who was able to tentatively identify it as a triple bromide preparation. Later in the day the patient's wife stated that he had ingested a whole bottle of "nerve tonic" on the previous day and that, although he had been a bit confused before this, he had become much worse after taking it.

Blood was then drawn for a serum bromide determination and therapy which consisted of the administration of massive amounts of sodium chloride by the oral and intravenous route was started. Because of the pedal edema he was given a diuretic and only two liters of normal saline was given each day parenterally. He was given eight grams of sodium chloride by mouth daily. During the first 24 hours he was combatative and required restraints and short-acting hypnotics. Thereafter he was cooperative and on the third day of therapy was able to walk about unassited. Serum bromide determination done by the University of Oklahoma Hospitals was reported as:

NaBr	153.6 mg%
KBr	227.7 mg%
Bromide	198.0 mg%

He was discharged asymptomatic on the sixth hospital day and returned to his shop two days later.

There have been case reports of individuals being hospitalized in mental institutions for bizarre behavior which was later proved to be due to bromide intoxication. This might have been the fate of this patient but for a fortituitous set of circumstances which led to the early diagnosis and treatment.

The chloride ion is replaced by bromide ions as the body is apparently unable to differentiate between these two closely related elements. The rationale of therapy consists of replacing the bromide by a high chloride intake over a period of several days. There are no withdrawal symptoms and follow-up treatment consists of psychotherapy for the basic, underlying, pathology.

The author wishes to thank Miss Ann Blackwood R.N. and Mr. Bill Goforth, hospital administrator, of the Atoka Memorial Hospital for assistance in preparing this case report.

Box 192, Atoka, Oklahoma

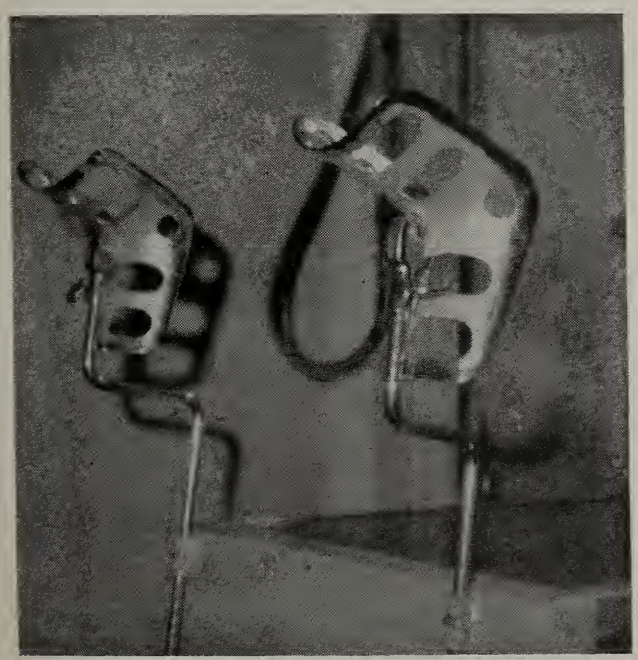
Adjustable Proctoscopy and Cystoscopy Attachment For a Tilt X-Ray Table

R. S. SRIGLEY, M.D., F.A.C.S.
J. D. WEEDN, M.D.

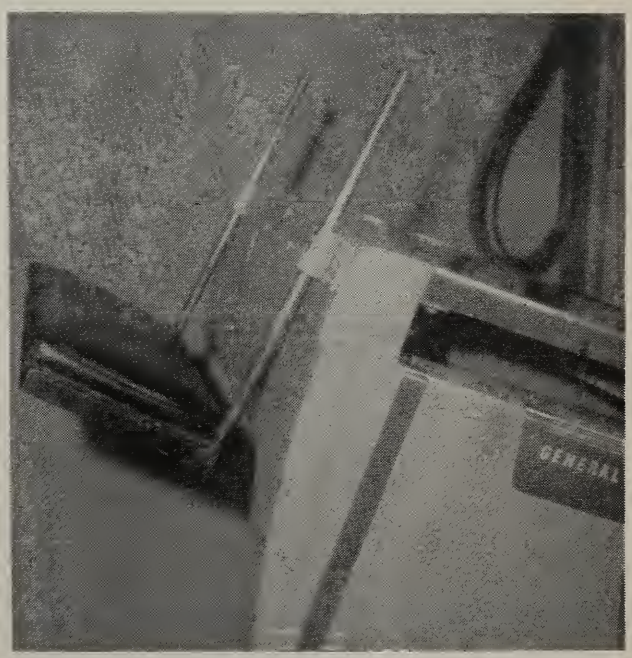
IN THE SMALL CLINIC, where space is at a premium, there is insufficient room for a separate proctoscopy table and a cystoscopy table. Although the knee chest position on an ordinary examining table may be satisfactory at times, there are many patients in whom proper positioning on a proctoscopy table is very desirable. For proctoscopy, a simple attachment for an ordinary tilt x-ray table has been devised which may be easily made by a mechanic. The attachment has been used for several years with highly satisfactory results. It is usually necessary for the operator to stand on a foot stool when the patient is elevated to proper position. The foot rest of the x-ray table is positioned in a manner to support the hands and head. The attachment has been so satisfactory that it is quite convenient to do routine a proctoscopic examination on patients prior to a barium enema.

The attachment is designed to accommodate leg supports from an obstetrical table, and the x-ray table is then converted into a cystoscopy table. It is usually necessary, after the uretheral catheters are inserted, to pull the patient a few inches away from the foot of the table for the film to be taken if it is to include the kidneys and ureters. A kelly pad protects the table from the water and is removed before the films are taken.

R. S. Srigley, M.D.
111 East Pecan, Altus, Oklahoma



For Cystoscopy



For Proctoscopy

The article reviews and is a second part of an overall study of the effectiveness of meprobamate and certain analgesic agents in combination as a pain relieving agent in acute muscle ligament spraining injuries. Techniques have been studied for hospitalized patients and for office practice.

Use of a Combination Meprobamate Synthetic Analgesic Agent

WILLIAM N. HARSHA, M.D.

William N. Harsha, M.D., has been certified by the American Board of Orthopaedic Surgery since graduating from the University of Kansas School of Medicine in 1948.

Doctor Harsha is Clinical Associate in the Department of Orthopaedic Surgery at the University of Oklahoma School of Medicine and also a member of the teaching faculty in the College of Law at the University of Oklahoma.

He is a member of the Christian Medical Society, Association of Military Surgeons, the International College of Surgeons and the Oklahoma State Orthopaedic Association.

IN RECENT YEARS there has been a great increase in a number of chemical agents available to the physician to control muscle spasm and pain in acute musculo-skeletal lesions. It appears that many of these have gone through a fad phase lasting several months and have then been abandoned for newer chemical compounds.

A substantial number of patients visit physicians with complaints referrable to primary muscle spasm and/or muscle and ligament pain resulting from either acute trauma or the sequelae of degenerative disease. In times past, these patients were often controlled with antiarthritic compounds such as salycilates or more recently, the corticosteroids. These agents are effective in many instances and are of great value. There has, however, been an increasing need for agents that can be used on an ambulatory basis. Compounds are needed that do not have detrimental side effects and do not significantly alter body physiology as is seen from the use of steroid compounds and yet have a rather predictable effect on the musculoskeletal system.

As reported in the *Oklahoma State Medical Journal*[1] the author did have opportunity to study the effects of meprobamate on acute muscular pain seen in the cervical and lumbar ligament sprain problems. This agent, when used in adequate doses does not produce in most patients significant muscular relaxation. It is a satisfactory compound to use in hospitalized or at least non-ambulatory patients where the goal is primary muscular relaxation. Meprobamate, within itself, has no apparent analgesic properties except as a side effect of good skeletal muscle relaxing propensity and thereby reducing the pain from musculo-skeletal injury pain.

It was thought desirable to study a similar group of patients and to modify the compound of meprobamate with the addition of synthetic analgesic agents, namely, Zactain and small doses of acetyl sodium salycilate. The original group studied with the meprobamates were by in large hospitalized patients. The group under present study are typical office patients with perhaps a less severe injury or with situations that did not make hospitalization necessary. Again this group limits itself to painful complaints following injuries to the cervical spine and/or the lumbar spine. Disc rupture fractures or dislocations were excluded so that local effects of pain in the areas of the injury could perhaps be better monitored.

This series of patients includes 57 cases of acute muscle ligament spraining injuries

of the cervical spine in adults from the ages of 22 to 51 and 47 cases of acute lumbar muscle ligament sprains following trauma. The lumbar injury group were from the ages of 19 to 61. In several instances combined lumbar and cervical ligament sprains were encountered but for the purpose of this paper were separated as separate entities for study.

In each patient a careful and diligent history of the nature of injury, the time of onset of painful complaints and response to treatment prior to the consultation was obtained. A general physical examination and a complete orthopedic physical examination of the areas involved was carried out. Finally, appropriate x-ray studies were made. Patients with dislocations or fractures or patients with non-traumatic lesions such as infection or tumor were excluded from this study. A significant number of x-ray films of the spine showed apparent congenital abnormalities and varying degrees of degenerative change.

The purpose of this study was to establish, if possible, that a synergistic or enhancing effect of analgesic agents along with the meprobamates might exist and also to reduce the overall dose of meprobamate to a point that it can be safely and practically used on ambulatory basis. In the first series reported a minimum of 600 mgs. four times a day of the compound was usually required and occasionally up to 1200 to 1600 mgs. per day. In the present study, the injuries were such that it was desirable for the patients to continue their daily activities as much as possible.

A combination of 150 mgs. of meprobamate, 75 mgs. of ethoheptazine citrate and 250 mgs. of acetylsalicylic acid was used as the sole therapeutic agent.* Other modalities of physiotherapy in the form of heat, massage, hot packs, posturing, splinting where appropriate were used. No narcotic agents were used at any time in any of these patients and to the examiners knowledge no other medications were supplemented during the course of this therapy. Each patient was told that this was a research type of drug that held some promise of being well suited for the type of painful complaint which he had and that we were interested in studying its effect. Paralleling the same group of patients a similar group as identical as possible as to nature of injury, age, length of symptoms and type of treatment was used as a control. Placebo tablets of like number which had all the external characteristics and taste of the compound were used in this second group. An attempt at double blind studies was made early in this series but was abandoned because of the relatively short nature of the painful experiences that some of these patients had and also because of the natural tendency of these painful complaints to become attenuated as the body heals its injury. These reasons did seem to invalidate a double blind type of endeavor for this type of program. It should be also noted that no attempt to study chronic painful disorders is included in this report.

*Equagesic—Wyeth Laboratories

Of the series of the cervical muscle ligament traumas studied using a standard dose of two of the above mentioned tablets with meals and at bedtime for a six day period, 42 or 74% reported significant and quite gratifying relief of their painful complaints. Ten or 16% reported some relief as opposed to periods with no medication. Three or 10% received no apparent benefit from the medication itself. Of the group of lumbar muscle ligament spraining injuries studied 35 or 74% felt that significant and satisfactory relief of pain had been effected. Four or 8% felt that some relief of pain had been effected and the balance or 16% were unable to notice any change in their pain pattern.

There were certain annoying side effects. In three of the patients nausea ensued following each dose. These three were not included in the series mentioned above. One patient after three days of therapy developed an exfoliating dermatitis of forearms and shoulders. The compound was discontinued with symptomatic management by dermatological associate with prompt response. This patient was not included in the series. A sixty year old gentleman with a lumbar sprain syndrome experienced rather disturbing urinary hesitancy and he voluntarily stopped the compound on the second day with prompt remission of symptoms. This

patient was not included in the series mentioned above. Drowsiness in a period from thirty minutes to two hours following use of the compound was reported in ten of the patients though in no case was it severe enough to make them feel that they were not totally competent in their every day activities and no frank sleepiness was noted. One patient mentioned that shortly after each dose he felt a sensation of melancholy or indifference which was quite unpleasant to him and in no way approached the euphoria that is seen not unusually with meprobamate compounds. Finally, gastro-intestinal gripping or heartburn type of symptoms occurred in eight patients included in this series. It was controlled in each instance by either a glass of milk, cookies, or crackers taken either during or immediately preceding the medication and had no apparent effect on the utility of the compound.

Summary

One hundred four cases of acute cervical or lumbar muscle ligament sprains were seen on an ambulatory basis. These were treated by use of a compound containing 150 mgs. of meprobamate, 150 mgs. of ethoheptazine citrate and 250 mgs. of acetylsalicylic acid. A satisfactory response so far as control of acute pain was obtained in 74% of the cases. A fair though incomplete relief of painful complaints results in 16% of cervical and 18% of lumbar groups and an unsatisfactory relief of the painful experience occurred in the balance of the patients. The compound has been shown to have certain undesirable side effects in a limited number of patients but in none of the side effects was there any real medical care problem produced and most of these effects were of a nuisance category.

In the control group of the same number of patients using placebo compounds a distinct difference in the effective control of pain was noted. In the first group of the cervical muscle ligament injuries 22% did report satisfactory results in relief of pain, seventy four per cent reported some but incomplete relief and the balance none. In a similar group of lumbar ligament sprains 18% felt that the placebos afforded quite satisfactory relief of their pain. Another 14% felt that some relief of pain had been effected but not what they considered to be satisfactory compared to use of more potent analgesic agents and the balance felt that no effect could be noted so far as the medication itself was concerned. This does show the difficulty in equating the effects of medications in a situation of this sort from a precise scientific point of view.

The only valid conclusions that can be drawn from this type of study are that, in general, patients who received the combination of meprobamate, ethoheptazine citrate and acetylsalicylic acid following acute muscle ligament spraining type injuries of cervical or lumbar spine received both quicker and more prolonged relief of their painful complaints than did a similar group of patients treated with placebos, all other therapeutic modalities of physiotherapy remaining the same. It is admitted that the introduction of the physiotherapeutic modalities of itself is designed to reduce these complaints and to a certain extent undoubtedly accounts for the fairly high satisfactory response to placebo medication. It has, however, been well shown in repeated double blind series tests with various types of chemical compounds that placebo medication is an effective therapy in a significant number of patients. This fact does need to be an integral thought in equating the overall effect of the compounds. The author does have the opinion that the compound Equagesic (Wyeth) is a satisfactory and useful additional tool in the care of the acute injuries due to muscle ligament sprain seen in every day orthopedic practice but has minimal complicating factors related to it, nothing by in large, however, to prevent its trial in ambulatory patients. The study does not include prolonged use of the compounds though in several cases of this series the compound was used daily for as long as six months with no effect any different from that in the short, several day period reported above.

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SMOOTH-MUSCLE SPASM...

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PRO-BANTHĪNE® *with* DARTAL®

Professional reliance on the therapeutic proficiency of Pro-Banthīne in functional gastrointestinal disorders has made it the most widely prescribed anticholinergic.

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These two reliable agents combined as Pro-Banthīne with Dartal consistently control both disturbed mood and disordered motility when emotional disturbances project themselves through the vagus to provoke such gastrointestinal dysfunctions as gastritis, pylorospasm, peptic ulcer, spastic colon or biliary dyskinesia.

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SUPPLIED as aqua-colored, compression-coated tablets containing 15 mg. of Pro-Banthīne (brand of propantheline bromide) and 5 mg. of Dartal (brand of thiopropazate dihydrochloride).



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Research in the Service of Medicine

PRESIDENT'S LETTER



The operation of a State Medical Association or Academy of General Practice or other unit of so-called Organized Medicine inevitably involves the election of officers and appointment of committees which seem, in time, to have the appearance of a self-perpetuating control group. The officers and committee chairmen presumably accept their positions for one or more of three reasons: they like the work, they feel the need for such duties to be performed and reluctantly accept their assignments, they are personally ambitious for advancement in the field of organized medicine. In the minds of many physicians, the latter group appears to constitute the majority of Medical Society and Association officers. Thus, Doctor Harold W. Thomas writing in *Medical Economics* of December 19, 1960, states, "Most of us are too busy with our own practices to attend State and National meetings regularly, as a few over-adrenalized M.D.s do." He then makes a plea for secret ballots to be sent to all members on issues of great importance, with the officers to be guided in their actions by these ballots.

This suggestion appears to have considerable merit. I believe the least we could do in Oklahoma would be to set up changes in the Constitution of our own Oklahoma State Medical Association to allow for mail ballots to be taken. Although we are not restrained from submitting any question to the membership for an opinion poll, we are prohibited from conducting a mail ballot either of the membership or of the House of Delegates for an actual vote on a given proposition. I plan to ask for this change in our Constitution at our annual meeting in Tulsa May 7, 1961.

I would welcome firm recommendations for more active participation by the membership at large in the affairs of the Association from any and all of you. The aim of the officers of the Oklahoma State Medical Association is to present matters fairly to the physicians of this State and to take direction from the expressed wishes of these doctors. Concomitantly, these same officers would be derelict in duty not to indicate strongly the advantages to the medical profession, if they exist, in one course of action over another. On such occasions these men may appear officious and give the impression that they are "trying to run the medical profession." But this is due, in the main, to their ineptness in presentation. It is often the old story of the honest effort by the clumsy performer. I firmly believe that in this organization we consistently have the honest effort. Try and disregard the sometimes clumsy performance.

Walter E. Brown, M.D.

WALTER E. BROWN, M.D.
President

AMA LAUNCHES SCHOLARSHIP AND LOAN PROGRAMS

Report of 14th Clinical Meeting

A scholarship and loan program for medical students, an AMA membership dues increase, the status of foreign medical graduates, the expansion of voluntary health insurance, health care for the aged, and new developments in polio vaccine were among the major subjects acted upon at the American Medical Association's Fourteenth Clinical Meeting held in Washington, D.C., November 28-December 1.

According to Wilkie D. Hoover, M.D., the Oklahoma State Medical Association's Senior Delegate from Tulsa, the scholarship and loan program and the proposed AMA dues increase were of particular interest to the Oklahoma delegation, since similar proposals have been debated at the state level.

Other Oklahomans participating in the business activities were: Malcom E. Phelps, M.D., El Reno, Delegate; R. Q. Goodwin, M.D., Oklahoma City, Alternate Delegate; Joe L. Duer, M.D., Woodward, Alternate Delegate; Walter E. Brown, M.D., Tulsa, President; John F. Burton, M.D., Oklahoma City, Member, AMA Council on Medical Service; John E. McDonald, M.D., Tulsa, Member, AMA Committee on Legislation; Winfred A. Showman, M.D., Tulsa, Delegate, representing the Section on Dermatology; Don Blair, Oklahoma City, Associate Executive Secretary; and, Jack Spears, Tulsa, Executive Secretary, Tulsa County Medical Society.

Total registration for the meeting reached 8,170, including 3,940 physicians.

Scholarship and Loan Program

The House of Delegates approved a scholarship and loan program proposed by the Special Study Committee of the Council on Medical Education and Hospitals, and also urged that there be local participation in the program at the state and county levels.



Doctors Brown, Duer, Hoover and Phelps are shown at a "strategy-breakfast," held prior to reference committee meetings. Doctors Goodwin and Burton were also present.

While administrative details remain to be worked out, the two-part program generally entails the creation of fifty, four-year scholarships each year and, at the same time, marks the beginning of an AMA-sponsored loan program.

The scholarships will be part of a "student honors" program, in which 250 undergraduate college students will be designated as AMA scholars each year. Fifty of these students will be selected each year to receive four year, non-refundable, medical education scholarships at the rate of $1,000 per year.

The student loan program calls for the AMA to create a "central security fund"



The AMA's House of Delegates is shown in session at the Sheraton-Park Hotel, Washington, D.C. State Associations are represented on the basis of one delegate per 1,000 active AMA members, or fraction thereof. Oklahoma has two.

which would be used to endorse or co-sign personal long-term loans at moderate interest to recommended students. Such loans would be made by local banks or other lending institutions.

It is estimated that the scholarship program will cost about $200,000 annually after four years operation. The central security fund for the loan program will need to be about 8% of the loans to be covered. Thus, a $1 million fund invested and held in trust, would liberate $12.5 million for low interest loans to students.

The United States will be divided into nine regions under the "student honors" program. Oklahoma is in Region 8, along with Arkansas, Missouri, Kansas and Texas. This region will be entitled to thirty AMA Scholars each year, six of which will receive scholarships.

Dues Increase

The House approved a Board of Trustees report which announced that a dues increase would be recommended at the annual meeting to be held in New York City, June, 1961. After much discussion, it was decided that a $20 annual dues increase should be requested, to be implemented over a period of two years: $10 on January 1, 1962, and $10 additional on January 1, 1963.

These additional funds are to be used to inaugurate or expand a number of programs, including:

1. Financial assistance to medical students.
2. Continuing education for practicing physicians.
3. Health advice to the lay public.
4. Medical research.
5. The expansion by the Communications Division of its program of faithfully portraying the image of the AMA.

It is important, the delegates emphasized, that the Board of Trustees report be transmitted to the grass roots level prior to final action next Spring.

The dues hike would raise an additional $2.8 million in annual revenue, bringing the total AMA budget to about $19 million per year. Of the $16.5 million expended by the

AMA in 1960, only 21% was derived from membership dues, the rest from earned income. For example, more than half of the budget comes from the advertising revenues of its various publications.

In another related action, the House asked the Board of Trustees to make every effort to reduce the number of physicians who are non-dues-paying members and approved a three-year study on the relationships of physicians not-in-private-practice to organized medicine. Total membership of the AMA on June 30, 1960 was 179,333 of which 143,428 were active dues-paying members.

Foreign Medical School Graduates

Meeting the problem of foreign medical graduates, with outside pressure from the State Department, the House of Delegates



On the second day of the AMA meeting, all resolutions and reports submitted on the first day are referred to reference committees, where any AMA member is free to argue his case. The reference committees then report back to the House of Delegates, where final action is taken.

adopted a report which included the following statement:

"In order that those foreign physicians who have not yet been certified by the Educational Council for Foreign Medical Graduates might be given further opportunity to enhance their medical education, hospitals would be encouraged to develop special educational programs. Such programs must be of educational worth to the foreign graduate and must divorce him from any responsibility for patient care. Foreign physicians may participate in these programs until June 30, 1961, with approval of the Department of State so that their exchange visa will not be withdrawn before that time. This will also allow the non-certified foreign physician the opportunity to take the April, 1961, Educational Council for Foreign Medical Graduates examination."

Voluntary Health Insurance

In place of a Board of Trustees report and three resolutions, the House adopted the following substitute resolutions:

"*Whereas*, It has been widely recognized that voluntary health insurance is the primary alternative to a compulsory governmental program; and

"*Whereas*, The public has shown its confidence in this voluntary system; and

"*Whereas*, Current social, political and economic developments compel a new and revitalized effort to make voluntary health insurance successful; and

"*Whereas*, The American Medical Association has consistently pledged itself to make available the highest type of medical care; therefore be it

"*Resolved*, that the House of Delegates direct the Board of Trustees and the Council on Medical Service to assume immediately the leadership in consolidating the efforts of the American Medical Association with those of the National Association of Blue Shield Plans, the American Hospital Association and the Blue Cross Association into maximum development of the voluntary, nonprofit prepayment concept to provide health care for the American people; and be it further

"*Resolved*, that similar leadership be undertaken to coordinate the efforts of private insurance carriers through conferences with their national organizations; and be it further

"*Resolved*, That, where feasible, efforts be made to cooperate with representatives of other types of medical care plans, other professional groups, and representatives of industry, labor and the public at large."

Health Care for the Aged

The House reaffirmed the Association's support of the Kerr-Mills Bill, which was

passed last summer, and its opposition to any legislation involving the use of the OASDI mechanism for medical aid to the aged. The delegates also urged all state and local medical societies to cooperate with the appropriate state officials and provide leadership in implementing the provisions of the Kerr-Mills Bill (per resolution from Oklahoma).

Polio Vaccine

The House agreed with a Board of Trustees report which said:

"In view of the fact that oral polio vaccine will not be generally available in sufficient quantity in 1961 for any large scale immunizing effort, the Board of Trustees of the AMA strongly recommends that the medical profession encourage the widest possible use of the Salk vaccine for the prevention of poliomyelitis. The Salk vaccine has been proved to be effective and since there are still many segments of the population not immunized against poliomyelitis every effort should be made to encourage the general public to take advantage of the Salk vaccine without delay."

The Board report was amended to suggest that a proper committee be established by the AMA to study the problems involved in administration of the new oral vaccine and to establish guides for physicians to follow when they are approached by various groups and asked for their support in administering oral polio vaccine.

Other Items

Named as 1960 General Practitioner of the Year was 44-year-old Doctor James T. Cook of Marianna, Florida, who was selected for his dedication to medical practice and service to the community. Last year, Chesley M. Martin, M.D., Elgin, Oklahoma, received the award.

Speaking at the Monday opening session, Doctor E. Vincent Askey, of Los Angeles, AMA President, called upon the delegates to support not only existing AMA programs but also the expansion of new programs necessary to meet the challenge of society. Doctor Askey assured the new administration in Washington of cooperation whenever and wherever possible, but emphasized that the AMA will not change its policies merely for the sake of conformity.

Johnson Given Regents Post

Mark R. Johnson, M.D., Oklahoma City internist, was named to the University of Oklahoma Board of Regents on Wednesday, December 28. The 37-year-old physician succeeds Mr. W. D. Grisso, Oklahoma City oilman.

The appointment was made by Governor J. Howard Edmondson.

Doctor Johnson is a 1946 graduate of the University of Oklahoma School of Medicine. He interned at the State of Wisconsin General Hospital, Madison, and took residency training at O.U.'s University Hospital.



MARK R. JOHNSON, M.D.

In 1952, Doctor Johnson was named assistant medical director in charge of admitting and outpatient department at the O.U. Medical Center. Prior to this, he was director of the city-county health department at Norman.

He served with the 45th Infantry Division in Korea, from 1950-52, as a major in command of a medical battalion. Other service includes over two years with the Air Force, with twenty-one months of the tour in the Azores.

At the present time, Doctor Johnson is Secretary-Treasurer of the Oklahoma State Medical Association and Chairman of the organization's Council on Socio-Economic Activities.

Brown, Burton Named H.E.W. Consultants

O.S.M.A. President Walter E. Brown, M.D., Tulsa radiologist and John F. Burton, M.D., Oklahoma City plastic surgeon, have been appointed as professional consultants to the Department of Health, Education and Welfare's Board of Public Assistance.

The appointments were made on December 23 by Kathryn D. Goodwin, Director of the Bureau.

The Bureau, which is a part of the Social Security Administration, is responsible for administering Federal grants to states in the Federally aided categories of old-age assistance, aid to the blind, aid to dependent children, and aid to the permanently and totally disabled. In addition, the Bureau has responsibility in the area of medical care for the low income elderly who are not on public assistance, as provided under the recently-passed Kerr-Mills Bill.

The general purpose of the consultant group is to advise the Bureau in its efforts to stimulate state assistance agencies to extend the scope and quality of medical care offered to the needy aged.

Both physicians are particularly well qualified for the assignment.

Doctor Brown, along with John E. McDonald, M.D., and others, played an important role during the planning stages of the Kerr-Mills Bill, in liaison capacity to Senator Robert S. Kerr.

Doctor Burton, OSMA President during the 1957-58 year, is Chairman of the American Medical Association's Committee on Indigent Medical Care and a member of the AMA's Council on Medical Service.

CALL FOR RESOLUTIONS

The House of Delegates will assemble in annual session on May 7, 1961 at the Mayo Hotel, Tulsa.

Resolutions from County Medical Societies are requested to reach the OSMA Executive Office prior to April 1, in order that they may be reproduced and circulated to all county societies in advance of the meeting.

Pyramid Life Beaten In Hospital Suit

In a far-reaching court opinion on December 15, U. S. Judge Stephen Chandler vindicated Cushing Municipal Hospital of charges of "fraudulent claims" brought by the Pyramid Life Insurance Company.

Judge Chandler's action climaxed twenty-one months of litigation, resulting in a victory for the hospital in the first case of its kind ever filed in Oklahoma.

The case grew out of a charge by Pyramid that 81 claims out of 176 filed against the company for hospital care since 1952 were "fraudulent." Pyramid said an audit of the files on these cases, involving $20,000 in claims paid insurance policy holders and doctors, revealed that the company had overpaid $8,000.

Later, however, the company reduced its charge, contending fraudulent claims amounted to $6,774, the amount it sought to recover.

Human Errors

In bringing the controversial case to a head, Judge Chandler indicated that he found "absolutely no fraudulent conduct, or any indication of such."

He said, in effect, if errors did appear, they were human errors, of a clerical and typographical nature. These errors involved only nine claims, representing a total aggregate of $127.65.

The case, pending since April 1, 1959, was settled after the federal magistrate had held a lengthy pre-trial session with attorneys for both sides. Cushing City Attorney Sterling N. Grubbs represented the hospital, and Robert L. Shepard, Tulsa, was counsel for the Oklahoma Hospital Association. On the other side was Kenneth Abernathy, Shawnee, attorney for Pyramid Life.

The case took on other controversial aspects when the insurance firm asserted its rights to access to the hospital's records. Originally, this was denied on advice of the hospital association. Subsequently, however, local hospital officials, on proper written authority from the patients involved, permitted the company to copy the records.

Blue Shield, OSMA 'Educate' Debaters

A group of Oklahoma college debaters gathered at the Blue Shield headquarters building in Tulsa, December 20, to receive authoritative information on the 1960-61 National Inter-Collegiate Debate Proposition: "Compulsory Health Insurance."

The young debaters were treated to an all-day conference, featuring the following topics: "The Voluntary Hospital System;" "The Pill That Could Change America;" "Insuring Health Care Costs;" and, "Solving Health Economics Problems with Blue Cross-Blue Shield."

Speaking to the group were Al Donnell, Administrator, Muskogee General Hospital; Walter E. Brown, M.D., President, Oklahoma State Medical Association; Richard A. Edwards, Health Insurance Association, New York City; and N. D. Helland, Executive Director, Oklahoma Blue Cross and Blue Shield.

Brown Speaks

Speaking to his subject, "The Pill That Could Change America," OSMA President Brown discussed the advantages and disadvantages of the British system. He pointed out that regardless of any merit the system may have in Britain, it is economically unsound and totally unnecessary in America. Doctor Brown estimated that about 20% of the U.S. population have some sort of government medical care, while over 70% have health insurance.

Under the direction of Blue Shield's Jim Dennis, the voluntary prepayment organization has been working with college debate teams for the past several months. In cooperation with Blue Shield, the Oklahoma State Medical Association has been supplying packets of information to the debaters.

The discussion question was chosen through an annual poll of debating coaches. Each student must learn both sides of the question.

Nationwide, more than 5,000 college and university students are taking part in the program.

In addition to the efforts of Blue Shield and the state and national medical organizations, the Health Insurance Institute has distributed 8,000 insurance reference kits.

PHS Takes Over CD Health Programs

Responsibility for planning and operating the Nation's emergency medical stockpile program has been assumed by the Public Health Service, it was announced recently by the Office of Civil and Defense Mobilization and the Department of Health, Education and Welfare.

OCDM Director Leo A. Hoegh said the transfer of stockpile operating responsibility from OCDM to the Public Health Service marks "a significant step toward mobilization readiness under the National Health Plan." This plan, part of the National Plan for Civil Defense and Defense Mobilization, aims at developing an organization and procedures for managing medical facilities, personnel and resources for national emergencies.

Arthur S. Fleming, Secretary of Health, Education, and Welfare, said "I feel that the transfer is a sound move and will help bring about an effective integration of plans and programs under the National Health Plan."

The transfer of authority involves about $200 million worth of medical supplies and equipment located in 33 warehouses throughout the country. Included in the stockpile are 1,932 "packaged" 200-bed hospitals for civil defense emergency use, valued at $20,000 each. About 1,500 of these are now stored at strategic locations across the country and others are in use for demonstration purposes and for training personnel. Oklahoma has twelve of the hospitals.

Stockpiling responsibilities of the Public Health Service, under OCDM policy control, will include procurement, maintenance, storage, inspection, quality control, distribution, utilization and property accountability of essential survival supplies and equipment.

The transfer of responsibility is consistent with other civil defense and civilian health mobilization assignments given the Public Health Service by OCDM to insure health services for the civilian population in the event of major disaster or national emergency.

The Division of Health Mobilization is coordinating all mobilization preparedness activities assigned to the Public Health Serv-

(Continued on Next Page)

Scurlock Gets Faulkes Award

Recipient of the W. F. Faulkes Award, one of three national awards presented at the National Rehabilitation Association Conference in Oklahoma City, October 10-12, was Voyle C. Scurlock, Director of the Oklahoma Vocational Rehabilitation Division for the past 19 years.

Scurlock has been a leader in the field of rehabilitation for many years, making Oklahoma's program for the disabled one of the nation's most outstanding. He has served as president of the Council of State Directors of Vocational Rehabilitation and on the National Research Advisory Committee of that group.

Under Scurlock's direction, the Oklahoma program has been built from a caseload of 2,361 in 1941 to the 1960 total of 8,016. A veteran of 27 years in rehabilitation work, he has been president of the NRA, a member of the NRA Board of Directors, and, most recently, served as program chairman for the national meeting in Oklahoma City.

The Faulkes Award is given for major technical and professional achievement in rehabilitation and was established in 1954 in honor of the founder and first president of the NRA.

Davis Honored

Another Oklahoma Cityan was also honored at the recent national meeting. Don Davis, Director of the Governor's Committee on Employment of the Handicapped, received a citation for distinguished service in behalf of Disabled American Veterans from 1950-1960.

(Continued from Page 22)

ice. Included in the Division's programs are the development of an Emergency Health Service to function during a national emergency; training courses for medical and health-related professions; self-help procedures for individual survival; institution of an emergency water plan; research into standardized medical treatment procedures for use with austere resources; management of health resources, including manpower, supplies, and facilities; assistance to governmental and non-governmental agencies, states and local communities in developing disaster capabilities.

Blue Shield Conducts "Medical Backgrounds Institute"

Oklahoma Blue Cross-Blue Shield, in cooperation with the Extension Division, University of Oklahoma, conducted a Medical Backgrounds Institute for its representatives, January 3-7, at the North Campus, University of Oklahoma, Norman.

The purpose of the training program was to give the organization's personnel a working knowledge of medical information that will enable them to better serve the members of the Blue Cross-Blue Shield Plans.

According to Blue Shield leaders, their representatives are often called upon for interpretation of medical and para-medical activities, as well as for the translation of scientific terms into every-day language. The Institute was designed to bring about a clear understanding of medical activities and terminology, so that the organization's representatives would be more effective in their relations with the public.

The first day of the meeting was devoted to such topics as: "The Goal of Medicine," "The Goal of Blue Cross-Blue Shield," and "The History of Medicine." Mr. Don Blair, Associate Executive Secretary of the OSMA, Mr. Ralph Bethel, Executive Vice-President, Blue Cross-Blue Shield, and Jack Welsh, M.D., University of Oklahoma School of Medicine, shared speaking responsibilities. Doctor Welsh also discussed medical terminology with the group.

On Wednesday, January 4, presentations were centered on the drug industry. Speakers were: Ralph Clark, Ph.D., Dean, O.U. College of Pharmacy; Mr. Donald T. Meredith, Upjohn Company; Mr. M. L. Jones, McKesson-Robbins; and, John B. Bruce, O.U. College of Pharmacy.

A panel on the roles of para-medical professions was presented on Thursday. Nursing, laboratory technology, physical therapy, hospital administration and dietetics were discussed.

The last two days were devoted to community health programs, health legislation and medical ethics.



From left to right, back row: Harold C. Wood, M.D., obstetrics and gynecology; William A. Betts, M.D., pediatrics; Selwyn A. Willis, M.D., general practice; Joseph K. Farish, Jr., M.D., anesthesiology; Edward W. Jenkins, M.D., thoracic surgery; Robert L. Kramer, M.D., ophthalmology; Samuel A. Ferris, M.D., internal medicine; and John F. Fitzgibbons, M.D., pathology.

Seated, front row, left to right: Robert W. Dean, M.D., obstetrics and gynecology; James G. Coldwell, M.D., pediatrics; Victor Ray Neal, M.D., anesthesiology; James E. White, M.D., orthopedic surgery; Thomas E. Slimp, M.D., dermatology; Roy A. Lawson, Jr., M.D., director of medical education at St. John's Hospital; D. Reid Tickle, M.D., radiology; and Perry F. Crawford, M.D., anesthesiology.

Not present when the photograph was made were Clarence I. Britt, M.D., thoracic surgery; William R. Reid, M.D., psychiatry; John V. White, Jr., M.D., general practice; and Raymond E. Peeples, M.D., anesthesiology.

Indoctrination Dinner Held For New Tulsa Medics

New members of the Tulsa County Medical Society admitted during 1960 are seen as they attended the Annual Indoctrination Dinner held December 12th at The Mayo, Tulsa.

The Annual Indoctrination Dinner was attended by 50 physicians. Guest speakers included Mr. Richard Nelson, field representative of the American Medical Association, Chicago, Illinois; Mr. Sid Steen, executive editor of The Tulsa World; and Mr. Truman B. Rucker, Tulsa attorney.

Other guests included Walter E. Brown, M.D., President; Mr. Dick Graham, Executive Secretary; and Mr. Don Blair, Associate Executive Secretary; all of the Oklahoma State Medical Association.

Robert I. Lubin, M.D., was Chairman of the Annual Indoctrination Dinner.

Mr. Nelson outlined the goals of American medicine as he explained the past, present and future activities and problems of the American Medical Association. He emphasized that, contrary to popular belief, the AMA spent 85% of its time and budget on scientific, socio-economic and public information activities. "All its efforts," he said, "are directed toward the improvement of the health care of the American people."

Mr. Steen spoke on the physician's relationship with the press. He said press relations had gone from bad to good in recent years, and expressed hope that they would further improve in the future.

Mr. Rucker spoke from experience as a defense attorney as he pointed out practice pitfalls which lead to lawsuits.

Plans Develop for Annual Meeting

"The 800 physicians who attend the 55th Annual Meeting of the Oklahoma State Medical Association will have many interesting scientific and social activities to attract them," according to General Chairman C. S. Lewis, Jr., M.D., Tulsa internist.

The meeting is scheduled for Tulsa's Mayo Hotel, May 7, 8, and 9, 1961.

The three-day convention will open on a Sunday and conclude on Tuesday, rather than following the usual pattern of Monday through Wednesday. Scientific sessions and the House of Delegates meeting will run concurrently on Sunday, thus permitting physicians to be back in their offices on Wednesday.

Speakers Announced

Program Chairman Doctor Donald L. Brawner and his committee have already arranged for the following ten guest speakers, with two still to be selected:

L. Henry Garland, M.D., Professor of Radiology, University of California, San Francisco; George E. Burch, M.D., Professor of Medicine, Tulane, New Orleans; Ben Eiseman, M.D., Associate Profesor of Surgery, University of Colorado, Denver; Carroll B. Larson, M.D., Professor of Orthopedic Surgery, Iowa University, Iowa City; John I. Nurnberger, M.D., Chairman of the Department of Psychiatry, Indiana University, Indianapolis; Robert J. Prentiss, M.D., Urologist, San Diego; Patrick H. Hanley, M.D., Associate Professor of Proctology, Tulane, New Orleans; Wallace N. Jensen, M.D., Assistant Professor of Medicine, University of Pittsburgh; Paul A. di Sant-Agnese, Chief, Pediatrics Metabolism Branch, National Institute of Arthritis and Metabolic Disease, Bethesda, Maryland; and, F. J. L. Blasingame, M.D., Executive Vice-President of the American Medical Association.

On Monday evening, May 8, the President's Inaugural Dinner will be held at Southern Hills Country Club. Following a social hour and dinner, there will be inaugural ceremonies and entertainment.

The next evening, a dance will be held in the Crystal Ballroom of the Mayo, featuring a name-orchestra.

Ponca City Hosts First Regional Postgraduate Course

The first Regional Postgraduate Course will be held at the Ponca City Country Club, Ponca City, on January 24, 1961, beginning at 4:00 p.m.

The program will feature basic science, diagnostic, and therapeutic considerations of the kidney, and is designed to appeal to physicians in general practice and the specialties.

Dinner will be served after two hours of lecture, and following dinner will be another hour of lecture and an hour of discussion.

Conducting the course, which has been approved for four hours of Category I credit by the AAGP, will be Doctors W. O. Smith, John P. Colmore, and Robert Lindeman, all from the University of Oklahoma Medical School.

The course is sponsored jointly by the Oklahoma State Medical Association and the University of Oklahoma School of Medicine. Fee for the session, including dinner, is $7.50.

Future courses on this and other subjects will be held in other areas of the State. The courses have been arranged so as to enable physicians to attend with a minimum of time lost from their offices.

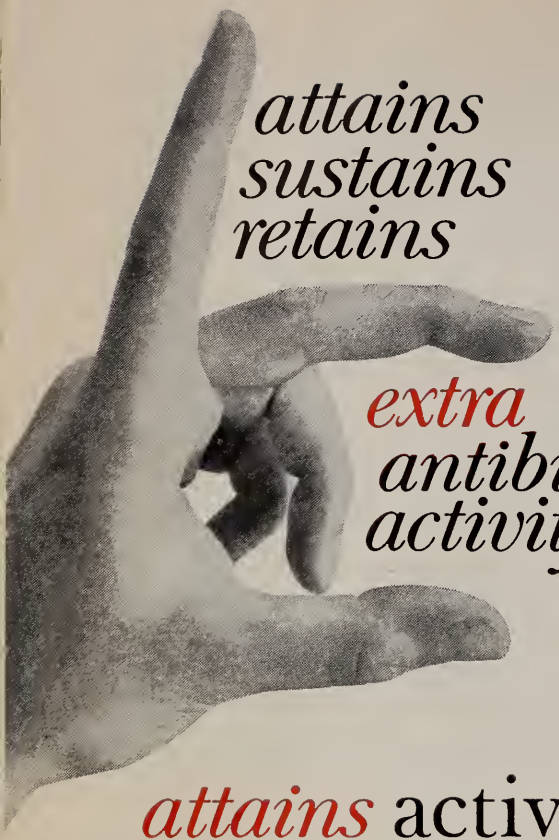
Reservations are being accepted by the Oklahoma State Medical Association or Doctor V. C. Merrifield, Ponca City. Make checks payable to the Postgraduate Committee, OSMA.

Film Strip for Society Meetings

An audio-film strip, entitled, *"Sorry, Doctor,"* is now available for showing at county medical society meetings, according to Gordon Fransen, General Agent of St. Paul Mercury Insurance Company, Oklahoma City.

The fifteen-minute film, which will be shown and explained by a company representative, is designed to assist the physician in evaluating his malpractice insurance coverage.

Request for showing should be made with the OSMA Executive Office, well in advance of the desired date.



attains
sustains
retains

extra
antibiotic
activity

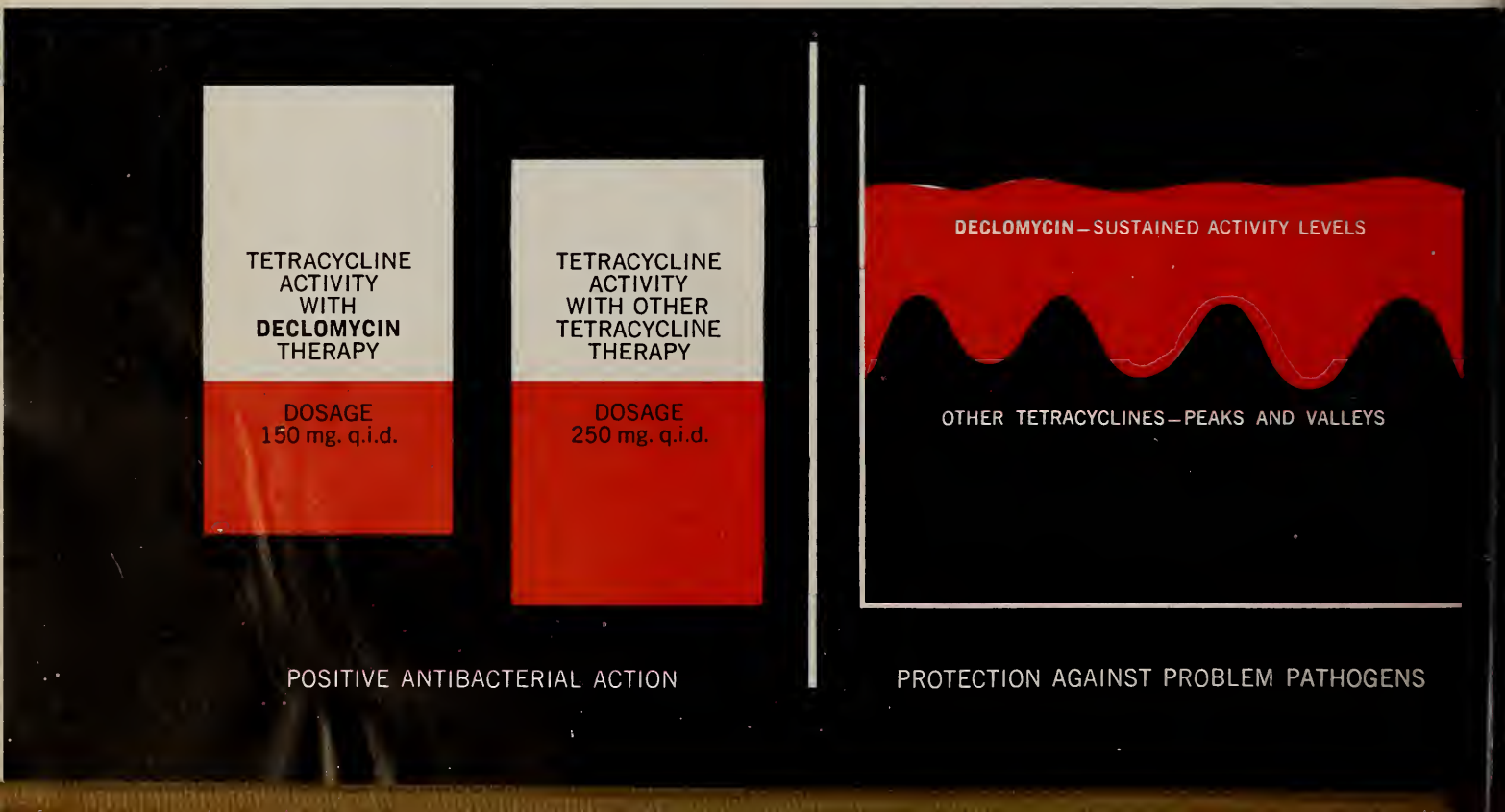
DEC

attains activity levels promptly

DECLOMYCIN Demethylchlortetracycline attains—usually within two hours—blood levels more than adequate to suppress susceptible pathogens—on daily dosages substantially lower than those required to elicit antibiotic activity of comparable intensity with other tetracyclines. The average, effective, adult daily dose of other tetracyclines is 1 Gm. With DECLOMYCIN, it is only 600 mg.

sustains activity levels evenly

DECLOMYCIN Demethylchlortetracycline sustains, through the entire therapeutic course, the high activity levels needed to control the primary infection and to check secondary infection at the original—or at another—site. This combined action is usually sustained without the pronounced hour-to-hour, dose-to-dose, peak-and-valley fluctuations which characterize other tetracyclines.

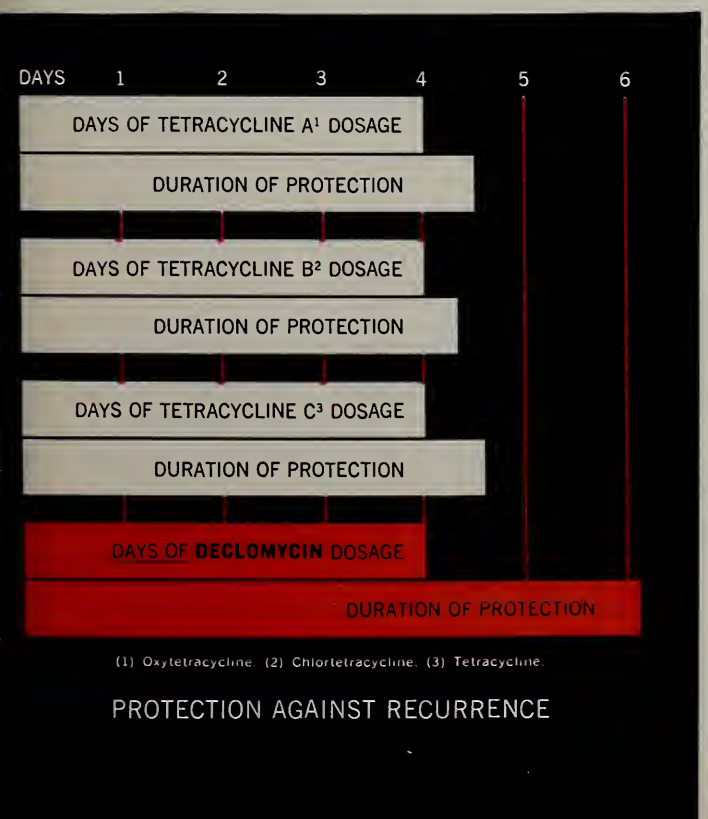


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retains activity levels 24-48 hrs.

DECLOMYCIN Demethylchlortetracycline retains activity levels up to 48 hours after the last dose is given. At least a full, extra day of positive action may thus be confidently expected. The average, daily adult dosage for the average infection—1 capsule q.i.d.—is the same as with other tetracyclines...but **total** dosage is lower and duration of action is longer.



(1) Oxytetracycline. (2) Chlortetracycline. (3) Tetracycline.

PROTECTION AGAINST RECURRENCE

CAPSULES, 150 mg., bottles of 16 and 100. **Dosage:** Average infections—1 capsule four times daily. Severe infections—Initial dose of 2 capsules, then 1 capsule every six hours.

PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. **Dosage:** 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into 4 doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored), bottles of 2 and 16 fl. oz. **Dosage:** 3 to 6 mg. per pound body weight per day—divided into 4 doses.

PRECAUTIONS—As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics. The patient should be kept under constant observation.

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LEDERLE LABORATORIES
A Division of
AMERICAN CYANAMID COMPANY
Pearl River, New York

Medical School Presents Service Awards

Forty-two physicians were honored by the University of Oklahoma School of Medicine at the annual service pin program December 8.

Doctor Mark R. Everett, dean and director of the Medical Center, announced awards to faculty members cited after ten years of service or at the end of each five years thereafter. Exceptions were preceptors, who receive pins after five years of continuous service.

Topping the list of physicians who have given of their time to teach medical students were two men with 50 year records—Everett S. Lain, M.D., professor emeritus of dermatology, and Robert M. Howard, M.D., professor emeritus of surgery. Both are past recipients of Medical School Alumni's annual "Professor Emeritus of the Year" award.

Others recognized at ceremonies in the Medical School Auditorium were:

For forty years service—Ray M. Balyeat, M.D., associate professor emeritus of medicine; John E. Heatley, M.D., professor emeritus of radiology; Raymond L. Murdock, M.D., professor of surgery.

Thirty-five years—Forrest M. Lingenfelter, M.D., professor of surgery; Henry H. Turner, M.D., clinical professor of medicine; Hugh Jeter, M.D., consultant associate professor of pathology.

Thirty years—George H. Garrison, M.D., clinical professor of pediatrics; Bert F. Keltz, M.D., clinical professor of medicine; J. Walker Morledge, M.D., clinical professor emeritus of medicine; Elmer R. Musick, M.D., clinical professor of medicine.

Twenty-five years—Donald W. Branham, M.D., professor of urology; Jess D. Herrmann, M.D., and George H. Kimball, M.D., clinical professors of surgery; John F. Kuhn, M.D., and Gerald Rogers, M.D., clinical professors of gynecology; Milton J. Serwer, M.D., professor of obstetrics; Mary V. S. Sheppard, M.D., assistant professor of medicine.



Among those honored at annual service award rites at the University of Oklahoma School of Medicine were, left to right, Everett S. Lain, M.D., for 50 years service; Ray M. Balyeat, M.D., 40 years, and Henry H. Turner, M.D., 35 years.

Twenty years—Richard M. Burke, M.D., associate professor of medicine; Joseph A. Rieger, M.D., clinical professor of psychiatry.

Fifteen years—Johnny A. Blue, M.D., assistant professor of medicine; Robert T. Sturm, M.D., assistant professor of surgery; Lewis C. Taylor, M.D., associate professor of anesthesiology; Paul M. Vickers, M.D., clinical professor of surgery.

Ten years—Hubert M. Anderson, M.D., assistant professor of surgery; Charles D. Bodine, M.D., associate professor of obstetrics; Kenneth E. Bohan, M.D., Charles E. Delhotal, M.D., Charles L. Freede, M.D., J. Neill Lysaught, M.D., H. V. L. Sapper, M.D., and Jerome D. Shaffer, M.D., assistant professors of pediatrics; John J. Coyle, M.D., assistant professor of gynecology; Samuel M. Glasser, M.D., and Edmond H. Kalmon, M.D., assistant professors of radiology; Alfred A. Hellams, M.D., assistant professor of psychiatry; Dick Lowry, M.D., assistant professor of otorhinolaryngology; R. Gibson Parrish, M.D., assistant professor of anesthesiology.

Five years pins went to these preceptors: Burdge F. Green, M.D., Stilwell; Edward T. Cook, Jr., M.D., Anadarko, and Cody Ray, M.D., Pawhuska.

Have You Heard?

The Garfield-Kingfisher County Medical Society has contributed $150 toward the foundation of a nursing research fund which will be administered by the American Nurses' Foundation, Inc., to sponsor and conduct research projects in various fields of nursing needs and patient care. The Oklahoma State Nurses association has a goal of $10,000 for the fund.

Officers for the Oklahoma City Clinical Society for 1961 are: THOMAS C. POINTS, M.D., President; SCOTT HENDREN, M.D., Director of Clinics; LYNN H. HARRISON, M.D., Vice-President; COYE W. MCCLURE, M.D., Secretary; and PAUL D. ERWIN, M.D., Treasurer.

WAYNE STARKEY, M.D., Altus, is one of eight named to a four-year term on the board of trustees for Oklahoma Baptist University at Shawnee. Doctor Starkey previously has served on the board and prior to that was a member of the university's board of regents.

CHARLES E. MARTIN, M.D., Perry, was recently installed as vice-president of the Will Rogers Boy Scout council during the council's golden jubilee dinner held in Stillwater.

FRANK JAMES, M.D., Hominy, has been named president of the Hominy Chamber of Commerce.

EARL W. ROBINSON, M.D., Enid physician, recently returned from Brazil where he attended an International Boy Scout Leader Training conference. He is Vice-Chairman of the Great Salt Plains Training Committee.

Doctors WILLIAM FEATHERSTON, WILLIAM LEEBRON and MILTON J. SUGARMAN have opened the new Southwest Clinic in Elk City. Located at Colorado Avenue and Country Club Boulevard, the facilities include a pharmacy.

WORTH M. GROSS, M.D., has been named president-elect of the Tulsa County Medical Society. He will serve as president during 1962, succeeding Wendell L. Smith, M.D. Out-going president is R. M. Wadsworth, M.D.

Coming Meetings

1961

JANUARY

AMERICAN COLLEGE OF PHYSICIANS, Mechanisms of Disease, Jan. 16-20, Columbia University College of Physicians and Surgeons, New York City. Write The American College of Physicians, 4200 Pine St., Philadelphia 4, Pa.

AMERICAN COLLEGE OF SURGEONS, SECTIONAL MEETING, Hotel Dinkler-Tutwiler, Birmingham, Ala., Jan. 16-18. William E. Adams, M.D., Am. Coll. of Surgeons, 40 E. Erie St., Chicago 11, Secretary.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, Statler-Hilton Hotel, Washington, D.C., Feb. 6-8. Mr. James O. Kelley, 756 N. Milwaukee St., Milwaukee 2, Wis., Executive Secretary.

AMERICAN COLLEGE OF PHYSICIANS, Selected Topics in Internal Medicine, Feb. 20-24, University of Oklahoma School of Medicine, Okla. City. Write to The American College of Physicians, 4200 Pine St., Philadelphia 4, Pa.

AMERICAN COLLEGE OF RADIOLOGY, Drake Hotel, Chicago, Feb. 8-11. William S. Stronach, LL.B., 20 N. Wacker Drive, Chicago 6, Executive Director.

AMERICAN UROLOGICAL ASSOCIATION, WESTERN SECTION, Hotel Sahara, Las Vegas, Nev., Feb. 6-9. Edmund Crowley, M.D., 1930 Wilshire Blvd., Los Angeles 57.

CENTRAL SURGICAL ASSOCIATION, Park Plaza Hotel, St. Louis, Feb. 16-18. Angus D. McLachlin, Victoria Hospital, London, Ontario, Canada, Secretary.

UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE SHORT COURSE, Cerebral Vascular Disease. Feb. 8. Medical school auditorium. Write Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th, Okla. City, Okla.

MARCH

AMERICAN COLLEGE OF ALLERGISTS, Graduate Instructional Course and Seventeenth Annual Congress. March 12-17. Statler Hilton, Dallas, Texas. Write John D. Gillaspie, M.D., Treasurer, 2141 14th Street, Boulder, Colorado.

AMERICAN COLLEGE OF SURGEONS, SECTIONAL MEETINGS FOR SURGEONS AND GRADUATE NURSES, Hotels Bellevue-Stratford, Ben Franklin, and Sylvania, Philadelphia, March 6-9. William E. Adams, M.D., 40 E. Erie St., Chicago 11, Secretary.

AMERICAN SURGICAL ASSOCIATION, Boca Raton Hotel, Boca Raton, Fla., Mar. 20-24. W. A. Altemeier, M.D., Cincinnati General Hosp., Cincinnati 29, Ohio, Secretary.

(Continued on Page xvii)

PHYSICIAN PLACEMENT

General Practice

John William Kennard, M.D., Blowing Rock Hospital, Blowing Rock, North Carolina; married; age 29; Bowman Gray School of Medicine, 1956; veteran; available August 29, 1960.

Carle H. Schroff, M.D., 3811 State Line, Kansas City 11, Missouri: Age 31; married; University of Kansas, 1959; veteran; available August, 1960.

Floyd E. Webb, Jr., M.D., 2527 Webster Drive, Alexandria, Louisiana; age 27; married; University of Oklahoma, 1957; available August, 1961.

Kenneth T. Woodsides, M.D., 1923 19th Loop, Sandia Base, Albuquerque, New Mexico; age 27; married; Medical College of Alabama, 1957; available April, 1961.

Maurice Lyle Peter, Jr., M.D., 411 9th Street, Warrensburg, Missouri; age 29; University of Oklahoma School of Medicine, 1957; available July 1, 1961.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

Bernd Bruno Bach, M.D., Harlan Memorial Hospital, Harlan,Kentucky; age 30; married; Goethe University, Frankfurt, Germany, 1957; Board eligible; available July 15, 1961.

Jeanne B. Johnson, M.D., 4917 SE Cornell Drive, Bartlesville, Oklahoma; age 31; married; University of Oklahoma School of Medicine, 1955; available immediately.

Sam A. Kinard, Jr., 3522 E. 17th Avenue, Denver 6, Colorado; age 29; married; Baylor University of Medicine, 1956; 2 years medical residency and 2 years cardiology residency; available July, 1961.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

Jack G. Smith, M.D., 812 North Third St., Bellaire, Texas; age 32; married; University of Texas School of Medicine, 1953; available January, 1961.

Thomas Turner Walton, Jr., M.D., 7375 Churchill, Detroit, Michigan: Age 29; married; Baylor College of Medicine, 1955; board eligible; veteran; desires group or associate practice; available July 1961.

George F. Winks, Jr., 217 S. Boulevard, Apt. 1, Richmond, Virginia; age 28; married; Medical College of Virginia, 1957; board eligible; available July 1, 1961.

Obstetrics and Gynecology

Walter G. Crowe, M.D., Mercy Hospital, Pride 4, Locust St., Pittsburgh, Pennsylvania; age 39; married; University of Tennessee College of Medicine, 1955; board eligible; available March 10, 1961.

Gerald R. Keilson, M.D., Medical Arts Building, Dallas, Texas, age 31, married, University of Texas, 1953; board certified, veteran, available in July 1960.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

Orthopedics

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specialty, broncho-esophagology and thoracic surgery; available immediately.

David K. McAfee, M.D., 2560 McCurdy Way, Decatur, Georgia; age 32; married, Northwestern, 1953; board eligible; available July 1, 1961.

Letter to the Editor

The Doctor's Statement:

Joe Doe, M. D.
55 Washington Ave.
Nowhere, U. S. A.

Mr. George Smith
33 Freedom Street

March 7, 1960: O.C.	$ 4.00	$ 4.00
March 7, 1960: X-Ray	$25.00	$25.00

The patient's complaint:
Dear Dr.:

Evidently this charge is wrong as I have never been charged but $10.00 for X-ray and too, why charge me $4.00 when all I got was X-ray. Have paid you lots of money and I am about broke. So, advise me if this is in order. I really think you should be a little more lenient—at least $10.00. But if not, I of course will have to pay, but I do think the charge is too much for a poor man and no work. The doctors and hospitals have about broke me.

Yours sincerely
George Smith

The doctor's answer:

Dear Mr. Smith:

I have enjoyed having you as a patient and a friend. Please don't let this disagreement concerning charges influence either relationship. However, you have made statements in your note to me which imply a considerable lack of understanding of the present medical realities.

First of all you state that the doctors and hospitals have just about broke you. Would you please consider that because of the doctors and hospitals you have enjoyed a long life and are reasonably free from pain and suffering. As far as my specific charges are concerned, you received in my office: an examination by me; one X-ray of the chest; and two X-rays of the skull. These services were required and necessary for your protection and had they not have been obtained I would have been negligent in my examination. In addition I would point out that had you been taken to the emergency room of a hospital, in addition to these services, for which you probably would have been charged more, you would most certainly have had to pay an emergency room fee of $5.00 to $15.00 in addition. Therefore, my fees were reasonable, proper, fair, and customary and in accordance with good medicine as practiced in this community.

Since you also base your claim for paying at a reduced rate on your age, unemployment, and lack of funds, I can assure you that in this respect the medical profession has always been perfectly willing, and continues to be, to provide for anyone regardless of their ability to pay and on this basis and this basis only—that is to say your inability to pay—I am charging off your account in full and assure you that I will offer my services when they are requested and charges will be based upon your ability to pay.

Very truly yours,
Joe Doe, M. D.

Deaths

CHARLES F. MOORE, M.D.

1883-1960

Charles F. Moore, 77-year-old, pioneer Durant physician, died November 23, 1960 in Durant.

A native of Bloomfield, Missouri, Doctor Moore graduated from St. Louis University of Medicine in 1909. He took postgraduate work in his specialty, EENT, at Tulane University School of Medicine.

Doctor Moore was a past-president of the Atoka-Bryan-Coal Medical Society.

In 1957, The Oklahoma State Medical Association presented Doctor Moore with a Life Membership in recognition of his years of service to the medical profession.

Auxiliary News

Metal or Mental?

A small girl asked, "Why are people always talking about metal health? What is it?" It was simple to explain the difference between metal and mental. As always happens when we answer the question of children, there is provocative thought: how wonderful if there were some "metal" in mental health. If only we could achieve perspective and balance and perception, or even bridge chasms of mental illness with the insertion of a steel pin or tiny wire.

Mental Health, as it is being foisted into the public mind at the present time, best-seller-wise, is aimed in two direction. Schizophrenia has melted into the background, to be replaced by the split-level personality, or "trap," as expounded by the two Gordons and Max Gunther. The other trend is a bit more subtle. Not too long ago everything seemed to hinge around sex, the composition of normalcy, and inferiority complexes. One wonders what happened to these three. Perhaps they were all cured, at least temporarily, by winning friends and influencing people all over the place. We might as well all face facts—most mental problems are now based on status-seeking.

Clean-Up Time

Regardless of trends and fads in mental health, we, as wives of doctors, can be so busy working on the drives and contributing time to the causes that we smile with pleasure at being described as "a going Jessie." With a nice, shiny New Year staring us in the face, let's all reflect: "But where is Jessie going?" As Thurber expressed it in his fable about the lemmings, each of us should learn before we die what we are running from, and to, and why.

When we launched our Safety program for the year, we said—let's start at home-base. Swimming safety: let's teach every one of our children to swim. Poison control: let's start with our own medicine cabinets and pantries. What, then, could be more logical than an auxiliary program for Mental Health, conducted by every county, starting with our own home lives and spreading throughout our community? Let us survey our homes and families, our attitudes, tensions, moral and religious values. Community-wise, our impact can be incalculable!

What Is It?

Back to the original question of the little girl: "What *is* mental health?" If you would like a few interesting thoughts for your own benefit, or for program discussion, we would like to recommend *The Substance of Mental Health,* by George H. Preston, M.D. Do not be misled by its simplicity: it is simplicity in depth. Dr. Preston's introduction is: "Many of us assume mental health to be our right. This book deals with what lies behind that right, how we came by it and how we may pass it on."

Our own State Mental Health Chairman has varied program ideas for you. She is: Mrs. Richard Witt, 513 North 13th, Muskogee.

March 30

March 30 rolls around quickly and pleasantly each year. On this day each county auxiliary honors our doctor husbands. From the printed report sent from Southern Medical, we find Oklahoma listed as one of the 100% participants in Doctor's Day.

Red carnations give external recognition to doctors. Proclamations, television, radio, and newspaper coverage were widely used throughout the southern states. For those preferring less public display, memorials were donated, doctors older in terms of service to the community were given recognition dinners.

Parties of all kinds were included in last year's observance, from simple to fabulous. (We notice our sister state of Arkansas reported: "The book *Folk Medicine* by Dr. D. C. Jarvis afforded ideas for a 'Gay Nineties' party." Our first reaction was to wonder if the vinegar and honey were served separately, or already mixed.)

Regardless of your plans, whether elaborate or simple, key your honoring to your own county auxiliary—but complete your plans now for Doctors' Day, March 30. Your state chairman will be forwarding ideas

(Continued on Page xvii)

25 YEARS AGO



Articles published in *The Journal* of the Oklahoma State Medical Association, January, 1936.

NEW YEAR'S RESOLUTIONS

I will recognize the sacredness of human life:

This at first glance seems a very foolish resolution for a physician to make when we devote most of our time to the saving of life and the relief of suffering. However, are we all as careful as we should be in driving our cars on the city streets and open highways? Observe traffic regulations, normal rate of speed; treat the other driver as though he were your friendly neighbor. Not only practice, but preach safety on the roads.

I will settle the liquor question in my own mind on the highest possible plane:

Physicians will be quoted in the coming campaign as to the effects of alcohol on the body; be sure to confine our opinions to its true physiological actions. We must make our decision as to its use as a beverage on a high plane for our opinions do much to mold public opinion.

I will be true to my religion:

Whether our religion be simply a code of morals, Judaism, Catholicism, Protestantism or what not, we must in order to reflect honor and credit upon our profession live true to our ideals and support in every possible way the religion we espouse. Religion is for strong men, for men of learning and influence. Theodore Roosevelt once said that if we continue to educate the mind and neglect to educate the heart we will develop a race that will destroy our civilization.

AUXILIARY NEWS

(Continued from Page 32)

soon: Mrs. Joseph J. Maril, 1720 Randel Road, Oklahoma City.

White House Conference

Physicians and auxiliary members were well-represented at Norman in July, when the White House Conference on Aging was held. Coverage of the Oklahoma conference was included in the July, 1960, OSMA Journal. No doubt most auxiliary members read the recommendations of the Oklahoma conference and have been following the Washington conference with great interest. If you have not, read up—we need to know all details so that we can enlarge and continue our own county programs on health care of the aged.

MISCELLANEOUS ADVERTISEMENTS

For Sale: G.E. 100-milliamper X-ray machine. Good condition. Contact John C. Wagner, M.D., Western State Hospital, Fort Supply, Oklahoma.

WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association. P.O. Box 9696, Oklahoma City, Oklahoma.

FOR SALE: 100 M.A. X-ray machine. Contact C. P. Taylor, M.D., 1201-D East 5th, Ada, Oklahoma. FE 2-4424.

SOUTHEAST KANSAS: For sale or lease, modern, completely equipped, x-ray, eight-room office designed to accommodate one or two doctors. Two-story building; office on 1st floor; upstairs suitable for living quarters or rental, county seat town of 3300, trade area 10,000, new 40 bed hospital, high school, 3 grade schools, 1 parochial school, 25 miles from Joplin, Mo., Miami, Okla., and Pittsburg, Kansas. Well established 17 years practice. Doctor deceased. Write Mrs. J. W. Spearing, 600 East Maple, Columbus, Kansas.

WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

FOR SALE: Two practically new matching Hamilton Examining Tables, two treatment cabinets, two stools, two lamps, walnut desk with matching swivel chair, and two side chairs. Contact Frank H. Cooper, M.D., 502 South Crawford, Norman, Oklahoma, phone JEfferson 4-5322 or JEfferson 4-6644.

WANTED: Board qualified surgeon and urologist to join Community Hospital-Clinic Staff. Contact Donald S. Leham, M.D., Medical Director, Elk City, Oklahoma.

COMING MEETINGS

(Continued from Page 29)

MISSOURI STATE MEDICAL ASSOCIATION, Hotel Muehlebach, Kansas City, Mar. 18-21. John I. Matthews, M.D., 302 Bolivar, Jefferson City, Mo., Secretary.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY. March 6-9. The Roosevelt Hotel, New Orleans, Louisiana. Write Mannie D. Paine, Jr., M.D., Secretary, The New Orleans Graduate Medical Assembly, 1430 Tulane Ave., New Orleans 12, La.

UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE SHORT COURSE, Urology-Symposium and C. B. Taylor Lectureship. March 8. Medical School auditorium. Write Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th, Okla. City, Okla.

APRIL

AMERICAN ACADEMY OF GENERAL PRACTICE, Miami Beach, Fla., Apr. 13-20. Mr. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Mo., Executive Director.

AMERICAN ACADEMY OF NEUROLOGY (members and guests), Sheraton-Cadillac Hotel, Detroit, Apr.

(Continued on Page xxxv)



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(Continued from Page xvii)

27-29. Mrs. J. C. McKinley, 4307 E. 50th St., Minneapolis 17, Executive Secretary.

AMERICAN ACADEMY OF PEDIATRICS, spring meeting, Sheraton-Park Hotel, Washington, D.C., Apr. 10-12. For information write E. H. Christopherson, M.D., 1801 Hinman Ave., Evanston, Ill., Executive Director.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Sheraton Hotel, Philadelphia, Apr. 24-26. Hiram T. Langston, M.D., 308 Carondelet Bldg., 7730 Carondelet Ave., St. Louis 5, Secretary.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Americana Hotel, Miami Beach, Fla., Apr. 21-28. Mr. Donald F. Richardson, 79 W. Monroe St., Chicago 3, Executive Secretary.

ARKANSAS, MEDICAL SOCIETY (open to A. M. A. members), Hotel Marion and Robinson Auditorium, Little Rock, Apr. 16-19. Mr. Paul C. Schaefer, 218 Kelley Bldg., P.O. Box 1345, Fort Smith, Ark., Executive Secretary.

UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE SHORT COURSE, Surgery—Techniques of Cardiac Resuscitation. April 12. Medical school auditorium. Write Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th, Okla. City, Okla.

UNIVERSITY OF TEXAS POSTGRADUATE SCHOOL OF MEDICINE, Second Annual Contact Lens Course. April 19, 20, 21. Houston, Texas. Course limited to board certified ophthalmologists or residents and fellows in ophthalmology. Write University of Texas Postgraduate School of Medicine, 410 Jesse Jones Library Building, Texas Medical Center, Houston, Texas.

SOUTHWESTERN SURGICAL CONGRESS (A. M. A. members may attend), St. Louis, Apr. 10-13. Mary O'Leary, 301 Pasteur Bldg., Oklahoma City 3.

MAY

AMERICAN COLLEGE OF PHYSICIANS, Americana Hotel, Miami Beach, Fla., May 8-12. Edward C. Rosenow Jr., M.D., 4200 Pine St., Philadelphia 4, Executive Director.

AMERICAN GYNECOLOGICAL SOCIETY, The Broadmoor, Colorado Springs, Colo., May 29-31. Albert H. Aldridge, M.D., 899 Park, Ave., New York 21, President.

AMERICAN OPHTHAMOLOGICAL SOCIETY (members only), The Homestead, Hot Springs, Va., May. Joseph A. C. Wadsworth, M.D., 108 E. 68th St., New York 21, Executive Secretary.

AMERICAN ORTHOPAEDIC ASSOCIATION (members and guests), The Ahwahnee, Yosemite, Calif., May 22-25. Lee Ramsay Straub, M.D., 535 E. 70th St., New York 21, Secretary.

AMERICAN PEDIATRIC SOCIETY, Hotel Traymore, Atlantic City, May 2-3. Conrad M. Riley, Denver General Hospital, Denver 4, Secretary.

AMERICAN PSYCHIATRIC ASSOCIATION, Morrison Hotel, Chicago, May 8-12. C. H. Hardin Branch, M.D., 156 Westminster Ave., Salt Lake City 15, Utah, Secretary.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Eden Roc Hotel, Miami Beach, Fla., May 5-7. Mr. G. Tod Bates, 350 Post St., San Francisco 8, Executive Director.

AMERICAN THORACIC SOCIETY, Netherland-Hilton, Cincinnati, May 22-24. Mr. Frank W. Webster, 1790 Broadway, New York 19, Executive Secretary.

AMERICAN UROLOGICAL ASSOCIATION, INC., Biltmore Hotel, Los Angeles, May 22-25. Mr. William P. Didusch, 1120 N. Charles St., Baltimore 1, Executive Secretary.

KANSAS MEDICAL SOCIETY (members and guests), Broadview Hotel, Wichita, May 1-3. Mr. Oliver E. Ebel, 315 W. Fourth, Topeka, Kan., Executive Secretary.

LOUISIANA STATE MEDICAL SOCIETY, Hotel Roosevelt, New Orleans, May 8-10. C. Grenes Cole, M.D., 1430 Tulane Ave., New Orleans 12, Secretary-Treasurer.

NEW MEXICO MEDICAL SOCIETY, La Fonda, Santa Fe, N.M., May. Mr. Ralph B. Marshall, 220 First National Bank, Albuquerque, N. M., Executive Secretary.

OKLAHOMA STATE MEDICAL ASSOCIATION, Mayo Hotel, Tulsa, Okla., May 7-9. Mr. R. H. Graham, Box 9696, Oklahoma City, Okla., Executive Secretary.

UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE SHORT COURSE, Pediatrics—Infectious Diseases in Infancy and Childhood. May 10. Medical school auditorium. Write Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th, Okla. City, Okla.

JUNE

AMERICAN COLLEGE OF CHEST PHYSICIANS, Hotel Commodore, New York City, June 22-26. Mr. Murray Kornfeld, 112 E. Chestnut St., Chicago, Executive Director.

AMERICAN DERMATOLOGICAL ASSOCIATION, INC. (members only), Castle Harbour Hotel, Tucker's Town, Bermuda, June 16-20. Wiley M. Sams, M.D., 25 S.E. Second Ave., Miami 32, Fla., Secretary.

AMERICAN NEUROLOGICAL ASSOCIATION, Hotel Claridge, Atlantic City, June 12-14. Melvin D. Yahr, M.D., Neurological Institute, 710 W. 168th St., New York 32, Executive Secretary.

AMERICAN RHEUMATISM ASSOCIATION, Hotel Roosevelt, New York City, June 22-23, 1961. Mr. Gerard W. Speyer, 10 Columbus Circle, New York 19, Executive Secretary.

SOCIETY OF NUCLEAR MEDICINE, Penn Sheraton Hotel, Pittsburgh, June 14-17. Mr. Samuel N. Turiel,

(Continued on Page xl)



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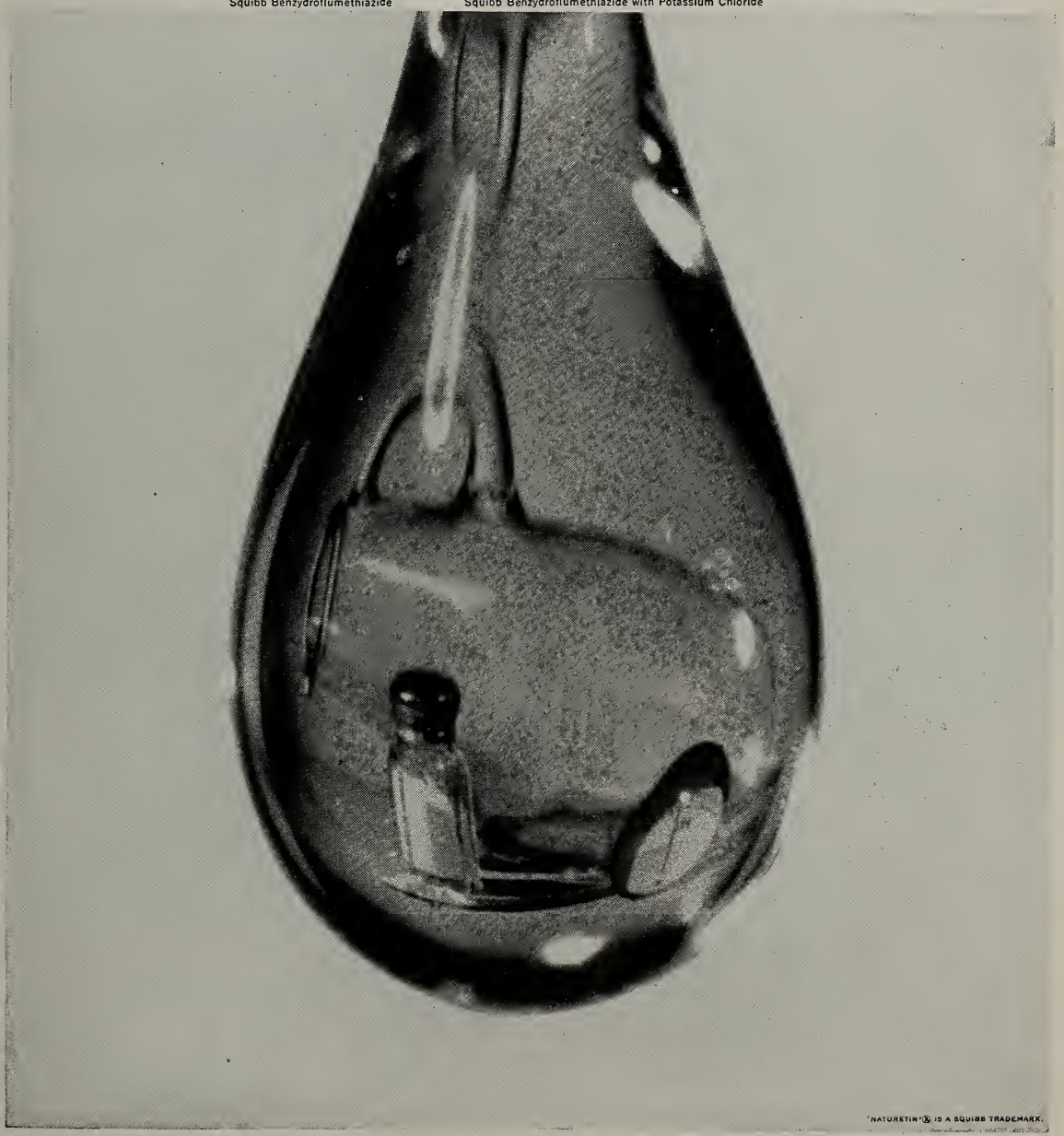
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References: 1. David, N. A.; Porter, G. A., and Gray, R. H.: Monographs on Therapy 5:60 (Feb.) 1960. 2. Ford, R. V.: Current Therap. Res. 2:92 (Mar.) 1960.

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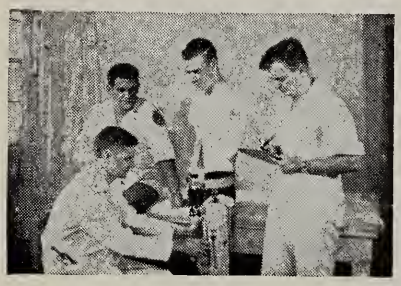
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430 N. Michigan Ave., Chicago 11, Executive Administrator.

JULY

INTERNATIONAL COLLEGE OF SURGEONS, NEW ENGLAND REGIONAL MEETING, Chatham Bars Inn, Chatham, Cape Cod, Mass., July 1-4. M. Leopold Brodny, M.D., 4646 N. Marine Dr., Chicago 40, Treasurer.

SEPTEMBER

AMERICAN HOSPITAL ASSOCIATION, Atlantic City, Sept. 25-28. Mr. Maurice J. Norby, 840 North Lake Shore Dr., Chicago 11, Secretary.

COLORADO STATE MEDICAL SOCIETY, Shirley-Savoy Hotel, Denver, Sept. 19-21. Mr. Harvey T. Sethman, 835 Republic Bldg., Denver 2, Executive Secretary.

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Palmer House, Chicago, Oct. 2-5. E. H. Christopherson, M.D., 1801 Hinmann Ave., Evanston, Ill., Executive Director.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct. 2-6. William E. Adams, M.D., 40 E. Erie St., Chicago 11, Secretary.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Oct. 15-20, 1961, Hotel Commodore, New York City. Write William B. Sherman, M.D., 60 East 58th St., New York 22, N.Y.

FEBRUARY 1961
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Journal

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Editorial

Loans, Scholarships, And Oklahoma Medicine

The Problem

Whether or not we care to admit it, the medical profession is faced with a problem of recruitment. No longer are we able to attract the best qualified college graduates—more and more the top brains of youth are being drawn to other careers in science and industry. Electronics, physics, chemistry, communications, aviation, and petroleum are but a few of the competing fields.

Numerous reasons have been advanced for this turn of events. Some of these are:

Cost of medical education
Time required for a medical education
High incomes enjoyed by top men of industry

Inducements to study offered by competing fields

Because of our rapid growth in population there has been predicted a future shortage of physicians, and since this is a problem which affects large groups of people it behooves the medical profession to take steps to correct the situation before other groups (such as Government) take steps for us. The immediate and pressing problem facing this State Medical Association is *the decline in number and caliber of applicants to our State Medical School.*

In addition to the competition from other careers, the factor of recruitment by other medical schools is an ever present one, and each year a certain number of students accepted for admission at our school withdraw to attend some other institution—often because of financial inducement in the form of scholarship aid. Generally, these students are from near the top of the list of accepted enrollees, and when it becomes necessary to replace them with men from the bottom, the overall quality of our student body suffers. It has also been stated that some of the premedical advisors in colleges in the state are directing their best students elsewhere. Steps are being taken to correct and combat this situation.

The Solution

Various means are apparent with which to overcome our difficulties. A few of these follow:

1. Advertising, or selling the medical profession as a career to top-flight youth. This should be active, should begin in high school, and should be done by the doctors of this Society. Plans to follow through on this are under consideration.

2. Increasing the stature of our medical school by improving the faculty, obtaining more appropriations for its operation, and increasing voluntary contributions both direct and through AMEF.

3. Offering aid to prospective students in surmounting the financial obstacle. It is with this phase that we are especially concerned, and we would like all County Medical Societies to discuss this and inform the State Medical Association of the conclusions reached. As background material for such deliberations, certain considerations are germain.

Financial Aid—Definition

There are three general forms of financial aid to students in use throughout the education world today:

Loan Funds—Money available to be borrowed and returned, usually at low interest rates which often begin after graduation.

Grants-in-Aid—Outright gifts to needy students with academic achievement not a factor.

Scholarships—Outright gifts to academically superior students. Need may or may not be a factor. This is a device long used to encourage excellence.

The Situation at O.U. Medical School

The availability of this type of aid at the University of Oklahoma Medical School may be very briefly summarized. There are some loan funds, but with the exception of the National Defense Loans (in use for the first time this year), they are extremely limited in the amount available per student. There are no grants-in-aid (we are speaking of medical students, not football players). There are almost no scholarships (a lady in a nearby town some years sends a thousand dollars). A nearby medical school has available twenty scholarships of five hundred dollars each for first year medical students, and most other medical schools have more scholarship money available than does O.U. It should also be brought out that first year medical students at O.U. are not permitted outside employment. This should make it readily apparent that the first year is a real hurdle—first to get qualified students and then to keep them.

OSMA Action

It has been proposed that a loan fund for University of Oklahoma Medical Students be established by the Oklahoma State Medical Association and this is under consideration. One suggestion has been to finance such a fund by an increase in dues until a certain level of the fund has been obtained at which point it would be self perpetuating. Another suggestion has been to obtain the money for such a fund from voluntary contributions. An *adequate* loan fund would be of great help in providing future physicians.

The Kay-Noble County Medical Society recommended at the May, 1960, House of Delegates Meeting, that a scholarship fund be established for needy first year medical students (at O.U. Medical School), to be financed by a small increase in yearly dues of this Association. Your Committee on Postgraduate Education recommended to the Council that this proposal be adopted, but the Council tabled the recommendation and in effect referred the matter back to the Postgraduate Committee for further study, where the matter now stands. One of the chief arguments against this proposal was that people do not appreciate what is given to them, and that, therefore, we should not give away anything. It is very simple to demonstrate, however, that those medical schools which have the most scholarships available have (1) by far the greatest support from their alumni in the form of financial contributions, and (2) a greater number of applicants from which to choose their entering classes. Scholarships should be considered as prizes for excellence, and in this state, as in all states, we need all the medical excellence we can obtain.

AMA Action

The American Medical Association has also recognized the problem, and at its most recent Clinical Meeting, approved the establishment of *both* a loan fund and a scholarship fund, each on a grandiose scale, with both contingent upon a dues increase to be voted on at the next AMA House of Delegates Meeting.

In Conclusion

This is a vital problem of great urgency, and we, of the OSMA, should take the lead with positive action toward its solution.

R. R. HANNAS, Jr., M.D., Chairman,
Council on Postgraduate Education

No parent ever consciously tried to create a disturbed child. Parents are willing to take responsibility for their unconscious when they feel emotionally accepted.

A Mental Health Approach to Parents of Disturbed Children

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Approach to Therapy

Freud's paper in 1909[1] gave the present emphasis on child psychiatry its impetus. At that time he was concerned with the internal dynamics of the genesis of the symptoms of the phobia in the boy, and was content to relate the chain of internal psychic events and symbols in the production of the single symptom. Over the years A. Freud[2] and Melanie Klein[3] formulated systems of analytic treatment for children, and expanded and confirmed the analytic theories formulated from the treatment of adults. In 1953 Glover[4] questioned the value of those systems of theory and treatment which could be replaced by a simple nonsense phrase in the nursery with apparently the same effect on the disturbed child as the analytic interpretations.

Further, Glover[4] points out the most obvious systems of variables which must be taken into account in evaluating any therapeutic result. These factors, known and recognized previously, are the unconscious factors and dynamics of the mother, the dynamics of the infant, and the interplay between these two personalities—the problems of inter-personal relationships, and communication. Later in the life of the infant the father makes an important contribution to this increasingly complex configuration; siblings and other persons also find a niche in the development of that single person. Each of these people contributes in his own singular way, and the problem of interpersonal communication becomes even more complex.

In the face of what appears to be an entangled mass of inter and intra personal relations, order must be obtained by some means to reduce these factors to a number which can be utilized in therapy when the individual breaks down. In an attempt to meet this dilemma of the working of the human personality, analysis at first confined itself to a particular person—in this case the child. However, gradually concepts of the ego structure and methods of approach have widened and new avenues of therapy have developed. Hartmann,[5] Kriss[6] following the lead of A. Freud,[7] have developed the concept of the ego as an autonomous structure as recently generalized by Rappaport.[8] Ericksen,[9] Bornstein,[10], Redl,[11] and others have contributed to the elucidation of the theory and treatment of children individually. Yet, in furthering prevention of the development of the neuroses, these methods have been successful only with individuals. Erna Furman,[12] and Beryl Sandford[13] have used treatment of the mothers of small children as a preventative measure. In this country Johnson[14] and her co-workers have found that juvenile delinquent children reflect the "lacunae" of superego development in their parents. I feel that the continuation of neuroses of parents in their children is not new, but that this factor has not been used often enough in practice as a preventative measure through treatment of the adult.

Guidance clinics over the world have for years attempted to work with families, and this system has reached its pinnacle in the approach of Ackermann.[15] All of these methods have been partially dependent on the alteration of adult personality for their success. Even in working with families it is recognized that unless some change occurs in the parental attitude, modification and permanent change in a disturbed child is less likely to occur.[2]

The Setting for Treatment

In many clinics psychotherapy of children is generally carried out directly in a form of playroom or group therapy unique to that particular clinic's personnel. Generally there is a period of investigation of the symptomatology of the child, an assessment of the child's personality, and of the personality of one or both of the parents. Following these studies an interview with the parents is conducted to convey the recommendations of the staff to the parents, and to plan subsequent therapeutic contacts, if any are considered. However, the focus of this series of events is on the symptoms of the child and usually the focus of the subsequent therapy also falls on the child.[16]

This chronology of procedure may vary somewhat from clinic to clinic, and the parents may be dealt with individually or in groups, as may the child. This child, though, receives the attention of the psychiatrist where this "team" approach is used, and to the social worker or the psychologist fall the parents for one form or another of "ancillary" or "supportive" therapy, in the interest of the child.

The Interviews

Since the primary complaints which bring the family to the clinic appear to be the symptomatology of the child this order of events seems reasonable, as the parents have been advised by an outside source because of the disrupting problem in the child. Yet when the parents make their first interview they are frequently heard to say something to the effect that "it must be my fault he behaves this way." Mothers in particular are prone to utter such words of self-condemnation regarding the child's problem. Usually the parents are then reassured that all may not be as black as it seems, and perhaps "we should find out a little more about the situation before we make such definite conclusions."

At this point the mother begins talking seriously about the obstreperous behavior, learning problems, or physical complaints which Johnnie shows. As long as the focus of the interview is left in this trend mother continues to unburden herself of all the gory details. However, if in this process gentle inquiry is directed to the reactions of the parents to the complained of behavior, one finds the focus of the interview shifts to the internal parental conflict. This can take the form of the reactions of the single parent being interviewed, reflecting the internal conflict and anxiety in that person, or it can

shift to the marital conflict which is invariably present. As the interview continues more and more of the parental conflict is uncovered. At the termination of the interview the parent can usually be led to further interviews by the simple suggestion that perhaps it would be simpler for the parents to find a resolution to their problems first; that, as long as the parents are so disturbed the child can only be under tension, which can be a reflection of the parental tension.

There are some parents with whom this approach will not only be insufficient, but with whom no approach will be sufficient. These people project their entire individual and marital conflict onto the child and no amount of influence can be brought to bear on them. Often in spite of their gross hostility and denial of any implication in the matter of contributing to the symptoms of the child, an alteration of the interrelationship between themselves and the child can come about. Presumably because the "therapist" drains the hostility off in his direction, and through the mechanism of guilt toward the child at least temporarily brings the child and parent closer. This in no way alters the basic unconscious hostile relationship toward the child, but it does alleviate the pressure on the child, and permit a "change" in the relationship at least for the moment.

When learning problems are the chief complaint it often happens that enough reorientation occurs during this time that the child may alter the learning pattern and quickly shift to a positive experience; since by this method of approach the child feels the emotional support of the therapist even though he never sees a therapist himself.

An Example

One case in which this occurred, the interviews with a maternal grandmother, who had raised an eleven year old boy from birth when his mother abandoned him to the grandmother, numbered only five over a period of five weeks. In this instance the boy had been warned of impending suspension at school and the grandmother had been advised by the school authorities to seek psychiatric help for the boy. The grandmother appeared at the clinic indignant that the ungrateful wretch of a boy had caused her to appear in a bad light in the eyes of the school officials. She insisted the fault lie with the poor teaching rather than, as she had been told by the school psychologist, with an emotional block against learning to read. She had given him private tutoring, had forced him through two separate special summer classes for slow readers, and after all of her efforts he still refused to learn the elements of reading. In the 5th grade his achievement tests revealed a 2.6 grade level in this skill, at which point the school authorities refused to permit him to continue in his grade level. The school authorities had made the referral to psychiatric help two years before, but the grandmother had refused to follow their suggestion.

During the course of the five interviews there was not one which could be said to be "smooth." The grandmother spent the entire time berating her ward for his ungrateful, uncooperative, lazy and stupid attitudes. She was totally unable to accept or hear that the child was extremely frightened of her, and his anxieties were so high he was unable to concentrate enough to learn to read. At the third interview of the hostile, negativistic, and rebellious behavior of the grandmother, she reported suddenly, like magic, the boy had begun to read. All the lessons, driving and punishment she had administered previously had not produced the total of the effect she saw now in this spurt of effective learning. The school reported his tensions and behavior were greatly relieved and he had achieved a full year's advance in achievement during this period. The grandmother stoutly continued to deny any role or change in her attitude in the production of the original difficulty, but her antagonism for the center so increased that by the end of her fifth interview she announced she could not tolerate the defamatory accusations to which she had been exposed any longer, and she would no longer continue. Furthermore, it wasn't necessary for her to continue anyway as the boy had now learned to read.

Achievement levels of the lad had reached 4.5 grade level at the time she ceased coming. One year later he continued to do very well,

and had maintained his rate of learning, and was considered a satisfactory student who showed promise of being very bright. We had no way of estimating the alteration, if there was one, of his neurosis.

This grandmother had accomplished a similar devastating educational failure with her daughter. The daughter had removed herself from school at the age of 15 after a less than mediocre showing. The daughter had gone on to at least three marriages of which we were aware by the time her son was brought to us. She had supported herself by prostitution in between, and had no interest in this only child, the product of her first marriage.

Shifting Focus to Parental Neurosis

With the strength of the resistance the grandmother displayed, we felt treatment of the boy alone would have been insufficient since perforce he would have continued to live with the grandmother. Under these circumstances, what might have been accomplished on a day-to-day basis with the boy, could only have been undone as rapidly as treatment progressed, and he would have been lost to therapy as soon as he began showing signs of resistance to the unconscious of the grandmother. Our experience with this and other cases has led us to feel that unless there is some alteration in the basic attitudes of the parent or parent surrogate, no effective treatment can be carried out with the child alone. As the shift in the dynamics of the symbiotic relationship increased the anxiety of the parent to a degree, the premature withdrawal of the child patient results. The child shortly reverts to the "satisfactory" relationship to the adult unconscious, which usually is an unsatisfactory adjustment to other reality. The reality of the parental unconscious here is more powerful than other external reality out of the fear of loss of love, and fear of retaliatory aggression from the parent if the child does embark on a more independent emotional adjustment.

This approach to the neurosis of a child is not intended to attack the internalized neurosis in the child, but rather to modify those factors which are the continuing pressures of the realities of the neurosis in the adult which influences the pliable ego of the child on a continuous basis. By altering the neurotic need in the mother to reproduce her conflicts in the child, we thereby alter a portion of the child's ego structure, since even by the latency period the child's ego is not fully completed.[2] Completion of ego is a life-long process, even though the primary reaction patterns are laid down by the sixth year. If there were no room for further ego development, the possibility of alteration by any type of therapy would be remote—if at all possible. The continuing impingement of an adult parental neurosis has more effect on the development of the child's ego than does therapy carried out, at best on an infrequent schedule, with the child. Compared with the exposure to a parent, even a daily schedule of therapeutic interviews is infrequent.

Moral Approach Avoided

One of the primary factors in conducting the first interview is the lack of a moral approach to the parents. Most parents feel they have been "criticized" for being "bad parents" by the time they come to our initial interview. The more this suspicion is alleviated by the acceptance of the therapist that the situation is one of neurotic symbiosis between the parent and the child, the greater is the likelihood the parents will accept their role in the production of the symptoms of the child. Parental conscious guilt has to be alleviated within the first interviews or the approach is not successful.

The "therapy" of the adult seems to follow a course, the points of which are similar from patient to patient regardless of the presenting symptoms of the child, but the resistance in reaching those points and the working through of them varies directly with the depth of the repression.

After the first step of shifting the focus to the parental neurosis—the second (and so closely interrelated that it is difficult to separate), the anxieties in the adult are replaced where they originated—in the adult, and not projected into the child. From then on the therapy of the adult proceeds as if the child had never been the entering wedge

for treatment, although as with any other presenting symptoms, it recurs throughout the course of treatment. However, as soon as the anxieties are assumed by the adult, the tension of the child eases because the child no longer has the anxieties of both people to bear. From then on the child is freer to proceed with his own development.

Another Example

Another case may illustrate more clearly how resistive is the defense of some parents, and at the same time how high the anxieties and positive wishes to be of help to their child. A 35 year old widow, mother of four children, was referred by a friend when she expressed near panic on discovering her 10 year old boy, the oldest child, had been stealing women's underclothing from neighborhood clotheslines. She was fearful this behavior of her son would be drawn to the attention of the juvenile authorities so she sought aid for the boy voluntarily and desperately.

The child was about 8 years of age when his father was killed in an auto accident. Insurance and pension through federal agencies provided sufficient financial support for the family until the youngest child was to reach the age of 18 years, provided the mother did not remarry during that period. A new marriage would cause all pension to the mother, as a widow, to cease; although there would have continued a portion of the funds to insure future education for the children. This mother had managed her finances well; although they were not plentiful, she was buying a home and there was no want for the necessities of life. However, because of the regulations of payment, she was under constant deprivation of normal human male companionship in the form of marriage, unless she chose to sacrifice an assured adequate income. Furthermore, she was exposed constantly to frequent contacts with unattached men, and married men who were on detached duty for several weeks at a time. Her need for male companionship was as strong as any healthy woman her age, so she was under constant conflict. Furthermore, her marriage had been a very satisfactory one, and the death of her husband was completely unexpected.

The mother's breeding had been one of deprivation, economic and emotional. She had been the eldest of five children and there had been a divorce between her parents when she was 12 years of age. She had had contact with her father, who had remarried, but it was necessary for her to leave home at the age of 16 to seek employment. The father was a laborer and although he contributed financially to the limit of his legal and monetary capacity, there simply was not enough to do more than keep them together under very poor circumstances. Her mother was of the complaining type and found a myriad of "physical" illnesses which limited her capacity to even keep the children clean. She worked between illnesses, but headaches and vague physical complaints prevented her from cooking, cleaning and working. The organization of the household was left to our mother patient, and by the time she was 16 she felt she would have it easier if she left home and sought a place as a maid for room and board for the privilege of finishing her high school education. Meanwhile she maintained contact with her father and her mother as she remained in the same town. After completing high school she moved to a metropolitan area and sought employment as a clerk-typist and secretary, sending "home" to mother what she could spare from her earnings. She met her husband at age 22, and married about one year later.

At the time she met her husband he was on active duty with the armed services and subsequently being discharged, he took a post in a federal agency which necessitated his moving periodically from post to post. They had lived contentedly in this manner for nearly 10 years at the time of the death of her husband. The children progressed without overt difficulty, and there was a satisfactory financial security for them as well as full a social life as they desired.

All of this ceased with the death of her husband and suddenly she was catapulted into a situation which reminded her of her parents. She was unable to express overt grief at the time of the funeral and for some 18 months had remained withdrawn from human contact as much as possible, devoting her life to the children and re-establishing

contact with the religious faith of her childhood. She moved the family to the environment where she had met and married her husband, and had been unable to part with her husband's clothes, personal items of various nature and symbols of his employment such as special tools, etc. These items were in her room in the house she purchased, in the garage and in the attic in storage. She continued to live as though her husband had not died, but had simply gone for an extended leave. She constantly reminded the children of their father in numerous ways, and held him up to the eldest son as a man of integrity. At the same time she came to depend on the boy in the same manner as she had her husband, and in many ways turned to the child to aid in making decisions regarding the entire family.

For some six months prior to her appearance at the clinic she had begun to expand her social activity, taking in an occasional movie with other widows who lived near the military base, and participating to a limited extent in the officers' club activities to which she was entitled.

She had maintained contact with a dentist friend and his wife, with whom she and her husband had been socially close during their tour of military duty, although this dentist now lived several hundred miles away.

This was the situation at the time of her first interview. We saw her and as she denied her own frustrations to a point which precluded seeing her, we agreed to see the child in a playroom situation once weekly, recognizing that by some manner his natural sexual tendencies toward his mother were being stimulated unconsciously by her, and at the same time his superego had formed sufficiently well that he had not made any known overt sexual approaches to his mother or immediately younger sister. Rather he had developed the symptoms which were now bringing both of them to us. He was doing well in school, was learning to play a wind instrument, and had several boys his age with whom he "palled" around, much like any other youth in the latency period. He was not antagonistic to authority and was well liked by his peers and adults around him.

During the first course of treatment, lasting about 12 weeks, the boy worked through a great many fears about his sexual stimulation by his mother, and discussed the various situations in which he became stimulated; such things as passing her in the hall in their home when she would be partially unclad or clad only in her undergarments; being invited into the bathroom by her when she was bathing, and even though she was not nakedly exposed to him, he was greatly stimulated by her close presence and the hot steamy atmosphere of the small room. However, he never made an overt approach toward her, but either masturbated later or collected the women's undergarments as he had been accused, and then masturbated. He appeared to have had these impulses under control, and when this situation of stimulation was discussed with her, his mother denied hotly this behavior on her part. "Furthermore," said she, "he hasn't been stealing underclothes for several weeks, so he seems to be cured." Whereupon she discontinued his treatment in a huff that we would consider her such a bad mother as to behave in such a manner. During the series of interviews with the boy, his mother refused to talk with anyone on a regular basis since she was not able to accept any role in the stimulation of the child.

About three months after he was removed from treatment by the mother, he was accused of taking a girl's purse at school, removing the money from it and discarding the empty purse. A chain of circumstantial events was established by the school personnel which pointed directly to him. He was confronted with the circumstantial evidence and admitted taking the money. Referral to the juvenile court followed, and since he had admitted the act and had led his accusers to the discarded purse and promised restitution of the money from his allowance, he was not suspended from school. At the juvenile court his mother confided that she had brought him to us previously because of her concern about his behavior, and in a promise from her that she would return him to us for therapy, the case was made inactive.

She followed through with the arrangements made at the court and brought him to us. On this occasion, because of our previ-

ous experience with her at the clinic, we took the attitude that we should prefer to see her. She refused to come in unless we saw the child, since she was unable to accept the fact that her behavior influenced his to that degree. She continued to maintain that the problem was basically his, and she was unable to understand him or how she was involved in it.

Another series of interviews were begun, and after some ten weeks of weekly interviews, the male therapist had established enough positive relationship that the child had discontinued his previous behavior and had identified with the therapist well enough to copy him almost openly in mannerisms, tone of voice and interests. It seemed to us he had achieved an identification which would permit him further development given the opportunity to do so without the excessive stimulation of his home life. The mother was informed of our opinion regarding him, and it was suggested she continue for a time to follow her own progress since she had barely touched her own problem, and had not established a solid relationship with her own therapist. She took the attitude that since he no longer needed to come, it was not necessary for her to do so. She discontinued two interviews after the boy was dismissed.

A period of six months passed and we had no word of the boy or his mother. The school term had ended for the summer holiday which was more than half over when we received a frantic call from this mother. Her son had been accused by one of the neighbor women of rifling a bureau and taking several pairs of women's underwear. Again the evidence was purely circumstantial but pointed clearly to her son. The series of events unfolded as follows: The boy had been playing in an upstairs bedroom with his chum, a brother of the girl who missed the underclothing, and on several occasions for a few moments at a time he was alone in her bedroom. No one else had access to the room until she discovered the loss. Immediately her mother called the boy's mother to inform her. An immediate search disclosed the garments stuffed behind his bureau in his room, wrinkled and wadded into a ball but otherwise unharmed. Because of the implication that the neighbor would call the juvenile authorities about his behavior, the mother became nearly panic-stricken and called us to take the child into treatment immediately. When we declined seeing the boy, she became furious but agreed to come in alone for one appointment. Since the clinic had had the experience with her which we had, we felt until such time as her own life would be more satisfactory at an adult level for her, there was little we could offer this boy. The stimulation for him in the home had been unabated, and her life had remained essentially the same for her. A bit of church, an occasional date, and frequent visits to the officers' club for an evening of rabelaisian frivolity but no attempt at a continued relationship with one man. Although she professed an interest in remarriage, the constant threat of removal of her funds should she remarry always posed the conflict. Such were the circumstances of her call. She was informed we would not see the boy until such time as some modification in her treatment of him could come about. She was furious, but she agreed to come only to keep her son out of the hands of the juvenile authorities.

A resident psychiatrist at the clinic began to see her twice weekly under the control of the director. Several weeks passed and her situation changed only by the commencement of acting out her therapy by re-establishing contact with the dentist at an intimate level. At the same time she was traveling to visit the dentist, she also was being courted by an eligible man who denounced marriage with her because of her children.

He seemed reluctant to marry a ready-made family. As he was in military service, he was transferred to another post and sent word back in about a fortnight that he had married. Our patient developed somatic complaints as she was deeply attached to him as she had been to her husband. She removed herself from treatment and sought a hysterectomy in a distant town, still not convinced that her behavior had precipitated or stimulated her son's behavior.

Another three months passed and we heard nothing except that we knew the son had not been apprehended, that the new term

at school had begun, and the boy was doing fairly well. We knew nothing of the sexual behavior of the boy; there were no reports of further stealing of any kind and this behavior seemed to be permanently removed as a symptom.

Again the mother called frantically. On this occasion she was calling because of her own anxieties. She had been outside in balmy weather hanging up the wash, and began conversing with the neighbor over the back fence. In the course of the discussion the neighbor remarked that when he watched her with the children in the yard and around the house she seemed to treat her eldest son more like a husband than a son. At that particular moment she was wearing shorts and a "halter;" normal wear for beach or sports attire, and not unusual for a housewife doing housework. She became acutely embarrassed, flushed and nearly panicked on the spot. She spent a sleepless night as it was too late in the day to make telephone contact with the clinic for an appointment. There were a host of memories of "minor" incidents regarding her behavior and her son's, and memories of his passing remarks in trying to encourage her to desist from practices of being relatively unclad around the house. Such situations as passing him in the hall between bedroom and bath clad only in her undergarments with a towel wrapped around her waist like a skirt, and his remarking "Mother, I wish you wouldn't do that." Her asking him to snap her dresses, or to aid in dressing her in one way or another, and his resistance to a point where she had to become harsh with him to make him comply. The appearance of his face when she asked him to come into the bathroom while she was bathing, but not exposed to him. His attempts to leave her and her callers to themselves in the living room, but her insistence he not only meet them, but also that he approve of them when she asked him later. All of these things were recalled, and to increase her guilt and anxiety, in the next two or three days she missed her dust cloths in the house. She distinctly remembered using them on the day she kept her appointment at the clinic. Her "dust cloths" were her worn and discarded underpants. She had used these for several years for dust cloths around the house even though the rayon was not absorbent nor efficient. Her husband had always been amused at the practice, and she had continued it after his death. She found them wadded into a ball, hidden under a pile of her son's dirty clothes in a corner of his closet. They were dried and stiff with a substance she assumed to be seminal fluid.

Fresh anxiety arose. For the first time she seemed to appreciate the fact that her behavior had influenced her son, and that what she said to him was not as important as her behavior.

During this period of acute reaction she was seen three times weekly, and all the previous attempts of her therapists to convey the content of her behavior to her via interpretations rushed to her memory, and there was a period of some four weeks when all the circumstances of the interpretations and her hostile resistance to them were recalled, along with fresh memories of incidents regarding her son.

When she had exhausted this initial spurt of self-investigation in the relative present, we began to see these events tied into older memories particularly regarding her father, then later involving hostility toward her mother because of the emotional load with which the mother had burdened her by her excessive "illnesses."

Sixteen months were required to work out the sufficient details of her early life to concentrate on the relationship with the therapist. After some three months of concentrated work on her relationship, she began to feel that the home situation was placid; her son was doing well in school and had begun to take a more conventional interest in girls. My patient had made new male contacts, had separated her personal interests from the family, and had solved many of her problems. She felt able to continue without the dependency on the therapist and so discontinued on a provisional basis.

This basis was continued for two years and recently I had the opportunity to meet her where I was giving a mental health talk in a community meeting. She was quite vocal,

friendly and indicated in a few brief words that all was well. She had known some two weeks in advance that I was to appear on the program, and so had had time to reactivate what ever residual might not have been adequately resolved. I felt the encounter was a comfortable one, and she has not requested new appointments.

I do not contend this woman underwent a thorough enough treatment that she could be said to have been analyzed; however, it was thorough enough to permit her to live a more comfortable existence without having to use her children defensively in her adjustment. Essentially, her ego organization remained unchanged except for the loss of the symptoms in her children, but that in itself justifies the apparent length and depth of this "brief" psychotherapy. During the course of the period of more conscious intense relationship to the therapist, a part of the hostility toward her father was displaced onto the therapist. At the same time the therapist acted as a depository for her fantasies of having a husband, and as soon as she could accept the death of her husband as not being caused by her hostility, the matter was dropped. The fantasies of the therapist as a husband receded and she was able to continue seeking gratification elsewhere. No infantile or childhood memories of the oedipal situation were brought to consciousness.

Summary

Two cases depicting a method of management of mothers brought to a community guidance center because of symptoms in their children are presented. The symptoms in the children are considered as being an extension of the neurotic conflict, in these cases in the mothers, and when the conflict is brought to its original source, in the adult, the anxieties of the child are greatly relieved; while at the same time the therapist must be sufficiently adept to be able to pursue the now overt neurosis of the parent to bring the case to a satisfactory adjustment. Analysis need not be necessary, but sufficient skill must be applied to permit a readjustment. Furthermore, such an approach to this type of case most frequently seen in a "guidance center" also is preventative since it does aid the adult in making easier adjustments toward all the other children in the family, as well as toward that one who brought the parent to the clinic in the first instance.

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An interesting case study of a patient who demonstrated a striking response to fibrinolysin in the treatment of an embolus to the right iliac artery.

FIBRINOLYSIN (Actase) in the Treatment of Peripheral Embolism

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A Case Report

ALTHOUGH fibrinolysin has been used in the treatment of thrombophlebitis, pulmonary embolism, and cerebral thrombosis,[1-5] to my knowledge it has not been previously successfully employed in the treatment of peripheral embolism in the human being. One patient treated with fibrinolysin by Moser[6] for a brachial embolus has been reported but the outcome was not mentioned. The patient who is the subject of this report was seen within two hours following embolism to the right iliac or proximal right femoral artery. Because it was believed that the thrombus had formed in the heart within two to four days prior to embolism treatment with fibrinolysin was considered to be worthwhile. The plan was to do a surgical embolectomy unless dramatic and significant improvement took place within two to four hours.

Case Report

V.D., a 36 year-old white housewife was admitted to the Ponca City Hospital on 22 May 1960 with a chief complaint of severe pain, numbness of the right foot and leg and inability to move the right foot, all of approximately two hours duration.

The past history was of significance in that the patient had had rheumatic fever at age 15 and was confined to bed for approximately nine months. She had been told that she had no residual except for a heart murmur. The review of systems revealed that she had had several episodes of congestive heart failure and had been treated with digitoxin and also diuretics.

About three days prior to the present illness she had some type of emotional disturbance and went to her family physician who discovered that she had auricular fibrillation. Two days later she was seen again by the family physician and at that time fibrillation had ceased. About 10 p.m. on the date of admission she noticed numbness, tingling, and transient pain in the left foot and leg and then rather severe pain in the right foot and leg. These symptoms were accompanied by numbness of the right foot and leg and inability to move the toes and foot.

On admission, the patient was a thin but well developed woman who appeared to be acutely ill. Vital signs were: Temperature 98.2, Pulse 88/min., Respirations 20/min., Blood Pressure 112/78. The left border of the heart was found to be approximately 1.5 cm. to the left of the mid-clavicular line. There was a soft presystolic murmur heard over the mitral valve. The right foot, leg, and knee were cold and there was anesthesia

to superficial touch extending up to the knee. The right foot was waxen and the toes were cyanotic. The foot had a rather mottled appearance. No pulses were palpable in the femoral, popliteal, posterior tibial, or dorsalis pedis areas. All of these pulses were good on the left. The remainder of the examination was essentially normal.

The pertinent laboratory data included: A normal hemogram. The urinalysis revealed 25-35 WBC/hpf, two to four RBC/hpf, specific gravity 1.024, pH 5.5. There was no protein or sugar in the urine.

Immediately after the admission history and physical examination were completed, the patient was given 50 mg. of Demerol and 50 mg. of Heparin intravenously. An intravenous infusion containing 100,000 units of fibrinolysin (Actase)* diluted in 250 cc. of 5% dextrose in water was started. At approximately three hours following the beginning of the infusion (one hour following the completion of the infusion) she was able to move the toes of the right foot and the sensation to touch had returned. At this time there was some question as to whether the foot was warmer than on admission. Shortly following this the pain seemed to subside a great deal. Approximately four hours after beginning the first infusion containing fibrinolysin it was possible to feel a very faint femoral pulse. This was questionable but in view of the improvement of symptoms it was decided to postpone the embolectomy which had previously been planned. Seven hours after the beginning of the first infusion a second infusion containing 50,000 units of fibrinolysin diluted in 250 cc. of 5% dextrose in water was started. At this time there was a definite femoral pulse on the right as well as a faint popliteal pulse. The foot and leg had warmed to approximately 10 cm. below the knee at this time. A definite anticoagulation regimen was started consisting of 50 mg. of Heparin intravenously every four hours. Twelve hours following the beginning of the first fibrinolysin infusion and five hours after the second infusion very good femoral and popliteal pulses could be palpated. At this time there was a faint posterior tibial pulse. The foot was no longer cyanotic or mottled and the temperature had definitely increased. Sixteen hours following admission all pulses of the right lower extremity were good. On the morning of the second hospital day Coumadin 50 mg. IM was given and a third infusion containing 50,000 units of fibrinolysin was started. At this time both feet were equally warm and the pulses were equal bilaterally. On the third hospital day the fourth infusion containing 50,000 units of fibrinolysin was completed. It is of interest that approximately twelve hours following the first infusion of fibrinolysin the body temperature rose to 102.4 but returned to normal the morning following. The patient did however continue to have temperature elevations up to 100° There was some associated transient nausea. The nausea was controlled with Compazine. Again following the fourth infusion the body temperature rose to 102.8° orally. By the fifth hospital day the temperature gradually returned to normal and remained so until the end of her hospital course. Her prothrombin time was controlled with the administration of 10 mg. Coumadin daily. On the fifth hospital day ambulation was begun and she was discharged on the morning of 3 June 1960 approximately eleven days following admission.

After discharge from the hospital she was kept on anticoagulant therapy for approximately one month. Since then she has had no symptoms or signs of vascular insufficiency. There have been no further episodes of auricular fibrillation.

Discussion

The author believes that this type of treatment was successful for at least two reasons. First, there was good reason to believe that the thrombus had only formed within two to four days prior to embolism. The patient had been treated by her personal physician for a long period of time and he had never known her to have auricular fibrillation. This led me to believe that endothelialization of the thrombus had not occurred and that fibrinolysin should be effective. Second, fibrinolysin was started within two hours following embolism and any dissolution of the embolus should tend

*ACTASE Fibrinolysin (Human), Ortho Pharmaceutical Corporation, Raritan, New Jersey.

to relieve associated arterial spasm. I believe that the embolus was large enough initially to have been capable of occluding the aortic bifurcation because at first symptoms were present in the contralateral extremity.

While the treatment was successful and the improvement dramatic I do not believe fibrinolysin should be used in all cases of peripheral embolism. Of course, in selected cases where there is a reasonable margin of safety in regard to time then consideration should probably be given to the use of fibrinolysin. In these cases the surgeon should be prepared to operate at a moment's notice.

Summary

The successful treatment of a patient who sustained an embolus to the right iliac artery or proximal right femoral artery with fibrinolysin is reported. Reasons are given for assuming the success of the therapy. The author believes fibrinolysin should be given consideration in selected cases only and that embolectomy should be performed unless improvement is rapid and dramatic.

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MEDICS IN DEFENSE

Metabolic Disturbances in Mass Casualties

The numerous casualties resulting from a thermonuclear attack will no doubt present a combination of injuries, including severe muscle damage, fractures, perforating injuries, burns, and radiation injuries. Associated with the problems of these wounds will be problems of electrolytic derangement combined with anemia. Blast injuries, crush injuries, burns, shock, and sepsis are all attended with impairment of the renal function, which may progress to acute renal insufficiency. These conditions require parenteral fluid administration but the paucity of medical personnel will make this form of therapy entirely impossible in large groups of individuals. The clinical picture of progressive deterioration and coma will therefore be unfortunately characteristic.

In these circumstances, most casualties must be allowed to drink fluids as they wish, though, if it is at all possible, those in shock and coma and those with gastrointestinal wounds should receive fluids only intravenously. Casualties who are likely to be given an anesthetic shortly should also be given fluids intravenously if it is possible. During the initial critical hours, salt and soda, by mouth, should be of great therapeutic value.

In casualties in whom acute renal insufficiency appears, heroic measures and constant supervision will be necessary to reverse the fatal trend. It is unrealistic to assume that such care can be provided for many casualties. Inadequate early care imposed by the circumstances will therefore cause many deaths among those who survive their injuries, and the deterioration to be anticipated among the survivors will, of necessity, influence *sorting and priorities* for more *definitive care* after the first phase of management has been completed.

On the other hand, many who survive their wounds will also survive renal shutdowns and will recuperate. In the interim, everything possible should be done to reduce the stresses imposed upon them, including, if that procedure seems to offer a better chance for their survival, the sacrifice of a limb.

Alimentation of all casualties will necessarily be almost exclusively by the oral route, with such fluids and food as are available.

The simple office procedures of blood pressure determination and palpation of the abdomen will often disclose serious arterial diseases, now surgically correctible.

Aneurysm and Occlusive Disease of the Aorta and Its Branches

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HAROLD A. WHITE, M.D.

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THE RAPIDLY developing field of vascular surgery has now rendered commonplace a number of operations on the arterial system unknown a few years ago. It is sometimes helpful to review the clinical syndromes encountered in everyday practice which may be corrected by direct attack on the underlying vascular lesion.

The aorta and its branches are the site of two major diseases: aneurysm and occlusion. Aneurysms are usually arteriosclerotic in origin, especially below the level of the renal vessels, whereas above this they are often luetic in origin. Occlusion is usually the result of gradual arteriosclerotic narrowing, but may be sudden and dramatic from embolism or from thrombosis based on an arteriosclerotic plaque.

Aneurysm

An asymptomatic abdominal aneurysm may be found on routine physical examination during abdominal palpation. It presents as a pulsating mass in the epigastrium, often higher than one might expect. A bruit may be heard over it. Such a definite, pulsating mass in the abdomen should always be further investigated promptly. Usually calcification in the wall of the aneurysm makes it visible on a plain x-ray film. Definite x-ray visualization or unquestionable palpatory evidence is all that is needed to make the diagnosis, and further proof such as aortography is usually unnecessary.

Case 1

The patient was a 61 year-old white male with a known duodenal ulcer. Routine examination also disclosed the presence of an asymptomatic abdominal aortic aneurysm. At operation a 7 x 10 cm. aneurysm was resected and replaced with a dacron graft. Pyloric obstruction from the duodenal ulcer rendered a subtotal gastrectomy necessary ten days later. He recovered completely. Subsequently, a patient with a similar com-

bination was treated by simultaneous resection of the aorta and stomach, with recovery. This is probably the preferred method.

If the aneurysm is associated with pain and tenderness, rupture is imminent and may occur at any time. Back pain from erosion into the vertebrae is a particularly ominous and valuable sign. In fact, any older person with low back pain not attributable to usual causes should be specifically investigated for abdominal aneurysm. These patients are sitting on a powder keg, and only reasons of the greatest import should delay immediate operation.

Case 2

An 82 year-old white man, in good health for his age, had a known asymptomatic abdominal aortic aneurysm of about two years' duration. He awakened one morning with pain and tenderness in the region of the aneurysm, and pain in the back. He was hospitalized and x-ray films, pyelograms and barium studies were noncontributory, except to rule out other causes of the pain. Over the next two days the pain subsided and he felt better. In view of the clinical improvement and his advanced age, the fatal decision was made to procrastinate. The aneurysm burst and he died within minutes, three days after admission.

This patient illustrates the urgent need for prompt investigation when pain is present. Even after rupture, however, resection may still be possible and should be attempted if the patient can be taken to the operating room alive. A prompt incision and a clamp across the aorta may allow replacement of blood loss and excisional surgery.

Case 3

A 67 year old white male had sudden onset February 6, 1960 of severe pain in the abdomen and left flank, followed by abdominal distension, pallor, shock and ecchymosis which spread from the left axilla to the hip. A diagnosis of ruptured aortic aneurysm was made, and a hopeless prognosis given. Over the next four days, although his condition continued to deteriorate, he remained alive, and was transferred to Tulsa February 10, 1960 in moderately deep shock, with a huge, palpable, liquid hematoma of the left flank and a florid thrombophlebitis of the left leg secondary to occlusion of the iliac vein from pressure of the ruptured aneurysm. He was taken immediately to the operating room and the abdomen opened. The patient was a large, muscular, vigorous man weighing 210 pounds, and his size, coupled with the difficulty of working in the huge retroperitoneal hematoma, formed an almost insurmountable obstacle. An attempt to evacuate the hematoma resulted in released pressure on the rent in the aneurysm, with exsanguinating hemorrhage. By the time a clamp was placed across the upper aorta, peripheral pulse and breathing had stopped, and the only vital sign was a faint flicker of pulse in the proximal aorta. While twelve pints of blood and four ampules of levophed were being infused under pressure through two sites, the aneurysms which involved the lower aorta and left iliac artery, was excised and continuity re-established with a bifurcation dacron graft. His condition then rapidly improved and he left the operating room with a blood pressure of 130/80.

Then ensued a most remarkable series of complications for a man to endure successfully. These included lower nephron nephrosis, persistent gastric dilatation, wound dehiscence, pneumonia, stress ulcer with hemorrhage, requiring twenty-two pints of blood, thrombophlebitis and toxic psychosis. He was ultimately discharged on his thirty-first day. He has regained his health and strength, and is vigorous and asymptomatic at this time.

The threatening character of aortic aneurysm dictates its removal wherever and whenever found, the patient's condition permitting. Although most are below the renal arteries, their removal is just as necessary if above the renals or in the chest, which is the reason aortography is usually unnecessary—one is going to remove it anyway.

Case 4

A 47 year-old hypertensive white male with a luetic history was found to have a

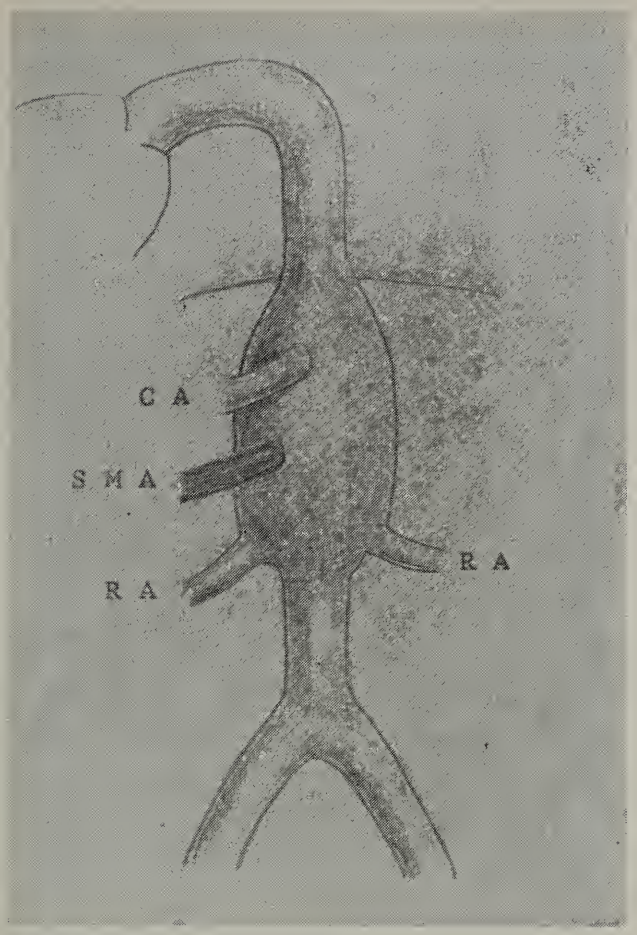


Figure 1: Case 4: Aneurysm upper abdominal aorta, with major vessels arising from it.

large upper abdominal aneurysm extending from the diaphragm to below the renal arteries (fig. 1). The entire aorta was exposed by a left thoracoabdominal incision and displacement of all the viscera and pancreas to the right. A dacron graft was placed into the side of the thoracic aorta and the other end united to the distal end of the transected aorta below the renals. Stepwise then, the celiac axis and renals were detached from their origins and implanted into the side of the graft. The superior mesenteric was the site of an old occlusion and therefore not transposed. The aneurysm was then excised. Figure 2 shows the graft in place after excision of the aneurysm. The patient put out urine from the first and was apparently doing well when progressive azotema developed and he died of uremia on his tenth postoperative day, in spite of 500 to 1,000 cc. daily urinary output. Autopsy revealed all anastomoses patent and functioning. There were several kidney infarcts present, and kidney damage from the long-standing hypertension.

This patient's kidneys, already damaged by hypertension, ultimately failed, even though circulation had been adequately restored. Newer techniques of local kidney hypothermia during operation might have permitted a successful outcome. In cases where the aneurysm is in the chest, use of by-pass with the heart-lung pump is necessary to maintain circulation during the period of excision and graft replacement.

Occlusive Disease

Arteriosclerotic plaques may build up at any major arterial bifurcation, ultimately slowing the blood flow or causing complete obstruction at the site. Beyond, however, the vessel usually remains open, receiving blood through collaterals, and available for restoration of blood flow through the occluded site. This may be done by excision of the affected area with graft replacement, thromboendarterectomy, or graft by-pass.



Figure 2: Case 4: Graft in place. Note side arms to renal arteries.

Vessels of the Aortic Arch

The innominate, subclavian, carotid and vertebral arteries may individually or collectively become obstructed by plaques at their origins. If all are obstructed an interesting rare syndrome, known as Takayasu's or "pulseless" disease, develops. The radial pulses may disappear on one or both sides, the blood pressure becomes low or unobtainable on one or both sides, and fainting spells, vertigo and mental changes are present. Diagnosis is by means of aortic arch angiography. Treatment is removal of the offending plaques.

More common, and a subject of much present interest, is occlusion of the internal carotid arteries. This is responsible for an appreciable percentage of "strokes" and is often remedial, with spectacular results. It is to be suspected when fainting spells, vertigo, transient aphasia and transient paresis are present. Bilateral carotid and, when necessary, bilateral vertebral artery angiography, will make or rule out the diagnosis and indicate the necessary approach. All such patients should be evaluated by a neurologist or neurosurgeon before operation is recommended. Operation for complete occlusion is seldom attended by success after a few hours have passed, but may be attempted in selected cases. Operation for partial, but definite, occlusion may be attended by dramatic improvement. The severity of symptoms after partial or complete occlusion on one side is determined by the integrity of the Circle of Willis. If it is fully formed and functioning, complete occlusion on one side may be unattended by any clinical symptoms, but if deficient, even partial occlusion of one side may cause severe symptoms. These factors should all be evaluated preoperatively, with adequate angiography and neurological evaluation. The operation is well suited to local anesthesia, where the state of consciousness may be continuously monitored. If necessary, a temporary polyethylene shunt may be employed to carry blood while the endarterectomy is being performed. In selected patients, hypothermia is of value in protecting the brain during the period of surgical occlusion.

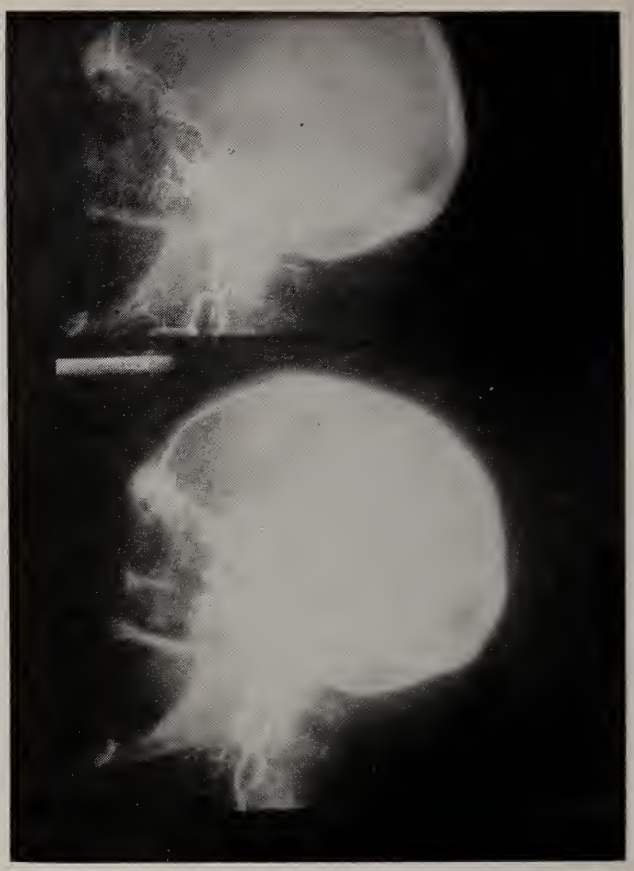


Figure 3: Case 5: Upper film shows complete occlusion of right internal carotid. Note almost complete occlusion of origin of left internal carotid in lower film.

Case 5

A 66 year-old white male began noting transient weakness in the left arm and occasional clumsiness of speech in January, 1960. On May 12, 1960 he was admitted to the hospital with partial left hemiplegia. Angiograms showed complete occlusion of the right internal carotid artery and almost complete occlusion of the left carotid artery at its origin (see figure 3). A left carotid endarterectomy under hypothermia was done, with removal of a large, thrombotic, calcified plug from the left common carotid artery and orifice of the internal carotid. An internal polyethylene shunt was placed to maintain some flow during the period of occlusion. This, in addition to the hypothermia, provided adequate protection during the twenty minute period of occlusion. He recovered promptly, and at the present time the only residual is left-sided weakness. He has excellent mental acuity and does his work without difficulty.



Figure 4: Case 6: Upper film shows left carotid. Lower film demonstrates complete occlusion of right internal carotid.

Case 6

A 51 year-old white man was involved in an automobile accident in which he lost consciousness for a few minutes. A few hours later he had another unconscious episode followed by weakness of the left side of the body, slurred speech and confusion. Bilateral angiograms (figure 4) showed complete occlusion of the right carotid artery. Operative exposure of the right carotid artery revealed old atheromatomous plaques with superimposed fresh clot completely occluding the internal carotid all the way into the skull. In spite of all maneuvers the distal vessel could not be unblocked and retrograde flow was never obtained. His condition was unchanged after operation, but he slowly improved with time. The case illustrates the usual poor results to be expected after the artery is totally occluded for more than a few hours.

Occlusion of the Renal Arteries

Arteriosclerotic narrowing of the renal arteries produces ischemia of one or both kidneys which results in the Goldblatt phenomenon. This is an often unconsidered cause of hypertension. All patients with hypertension should have an intravenous urogram and differential, or "split" renal function studies. A finding of depressed sodium and water excretion is very significant. If any of these tests are positive an aortogram should then be done. Marked narrowing or plaque obstruction of the renal artery with diminished opacification of the kidney is diagnostic. One or both kidneys may be involved. It is interesting to note that the involved kidney may be "protected" from the hypertension it has produced by its narrowed artery, while the "good" kidney becomes damaged from the arterial hypertension.

Treatment consists of renal endarterectomy, graft replacement, by-pass graft or nephrectomy. Nephrectomy, the classic procedure, has the disadvantage of sacrificing a possibly salvagable kidney, and leaving behind one damaged by hypertension.

Case 7

A 57 year-old man was investigated because of blood pressure of 220/140. Intravenous pyelography revealed a poorly functioning right kidney. An aortogram showed marked stenosis of the right renal artery and a small clotted aneurysm of the lower aorta. A right nephrectomy was done June, 1958. Blood pressure has been normal since and he has remained in excellent health.

Vessels of the Aortic Bifurcation

Local segmental arteriosclerotic obstruction of the terminal aorta and its branches is responsible for severe vascular insufficiency of the legs. This remedial state of affairs has been responsible for untold numbers of leg amputations for gangrene in the past. The familiar "Leriche" syndrome is known to all: intermittent claudication, dependent rubor, elevation pallor, shiny atrophic skin and "pipestem" legs, progressing to gangrene, first of the toes and then of the foot. In high occlusions, claudication of the hips is a particularly significant sign. Vasodilating drugs and symptomatic measures are of little value and lumbar sympa-

thectomy, although of help, does not attack the basic problem and should be reserved for cases of peripheral arteriosclerosis involving mainly the vessels below the popliteal.

All such cases as described above should be investigated by aortography and the location and extent of the obstruction assessed. If the nature of the pathology is appropriate for surgical relief, it may be dealt with by endarterectomy, excision and graft, or by-pass graft, depending upon which is appropriate in the individual patient.

Case 8

A 55 year-old white female developed increasing claudication of the legs and hips, to the point that she was unable to walk more than a block and found it difficult to stand while working. Femoral and distal pulses were absent. Aortogram (figure 5) showed thrombotic narrowing of the terminal aorta with normal ileofemoral systems. A dacron bifurcation by-pass graft was inserted from the aorta just below the renals to the iliac bifurcations (figure 6). Excellent femoral and foot pulses were restored and she now has no symptoms referrable to the legs.



Figure 5: Case 8: Aortogram shows narrowing of aorta beyond renals and irregular indentation at bifurcation.

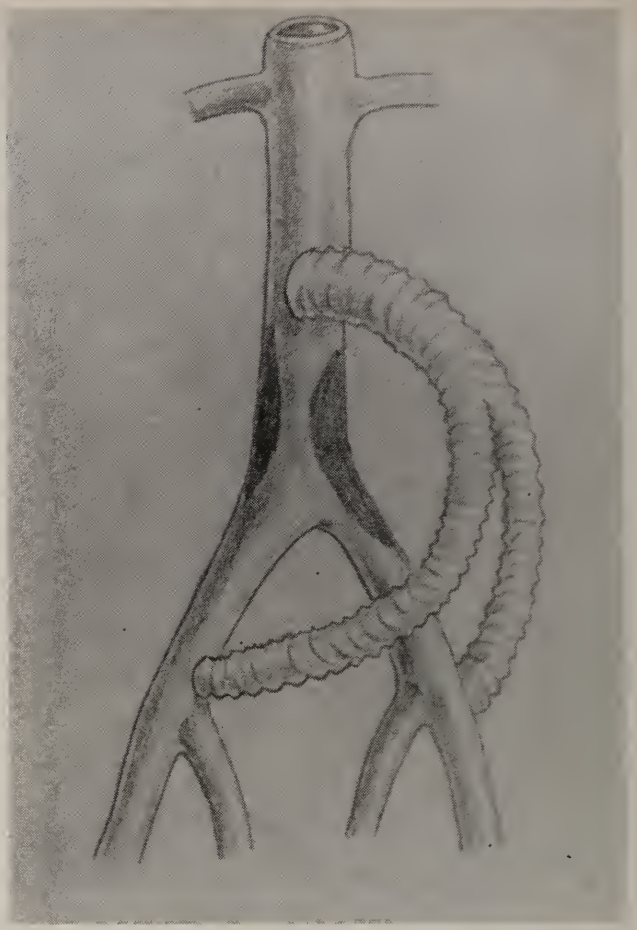


Figure 6: Drawing shows principle of by-pass graft, as used in Case 8.

Case 9

A 66 year-old white male had progressive claudication of the legs over a period of several years, progressing to continuous pain even at rest in the legs and left foot. No pulses were palpable in the legs and the left first toe was partially gangrenous. He was addicted to Demerol because of the pain. Aortogram (figure 7) showed complete occlusion of the aorta at the level of the renals. At operation the completely thrombosed distal aorta was excised and replaced with a dacron bifurcation graft. On the right the graft was terminated at the femoral bifurcation; on the left, after being anastomosed to the femoral bifurcation, it was continued down to the popliteal (figure 8). Excellent pulses were restored and the gangrenous toe healed spontaneously. At the present time he has no pain and walks well.

Sudden Occlusion

The aorta or its terminal branches may become occluded by an embolus or sudden



Figure 7: Case 9: Aortogram shows complete occlusion of aorta at level of renal arteries.

thrombosis superimposed on an arteriosclerotic plaque. This surgical catastrophe is accompanied by the well known symptoms of pain, anesthesia of the extremity, livid mottling of the skin and absent pulses. Immediate exploration of the artery is indicated. If there is doubt as to its localization, aortography or arteriography is helpful.

Case 10

A 64 year-old white man was hospitalized for coronary occlusion. He was placed on anticoagulants. Two days after admission he developed mild coolness and numbness of the left leg and absent pulses, but the leg was obviously viable. In view of his cardiac status, no treatment was advised. On the third day after admission he developed sudden numbness, coolness and pain in both legs, which became mottled and discolored. All peripheral pulses disappeared. He then developed acute heart failure with massive pulmonary edema, generalized cyanosis, unconsciousness and appeared moribund. An aortogram under local showed a complete block of the terminal aorta. He was intubated and taken to the operating room, where rapid digitalization was accomplished and aminophylline and vasopressors given in heroic doses. With practically no anesthesia, a complete midline incision was made. A saddle embolus of the aorta was found and removed, after which his condition improved dramatically. A large mucocele of the appendix was removed and the abdomen closed. After abdominal closure was completed the right leg was found normal, but the left remained cold, mottled and pulseless. A left femoral incision was made and an embolus extracted from the common femoral bifurcation, after which the leg became warm. After a stormy postoperative course complicated by gastric retention, azotemia, pneumonia, jaundice and wound dehiscence, he recovered and remains well, except for impaired cardiac status.

Case 11

This 55 year-old white female had a radical mastectomy for carcinoma in another

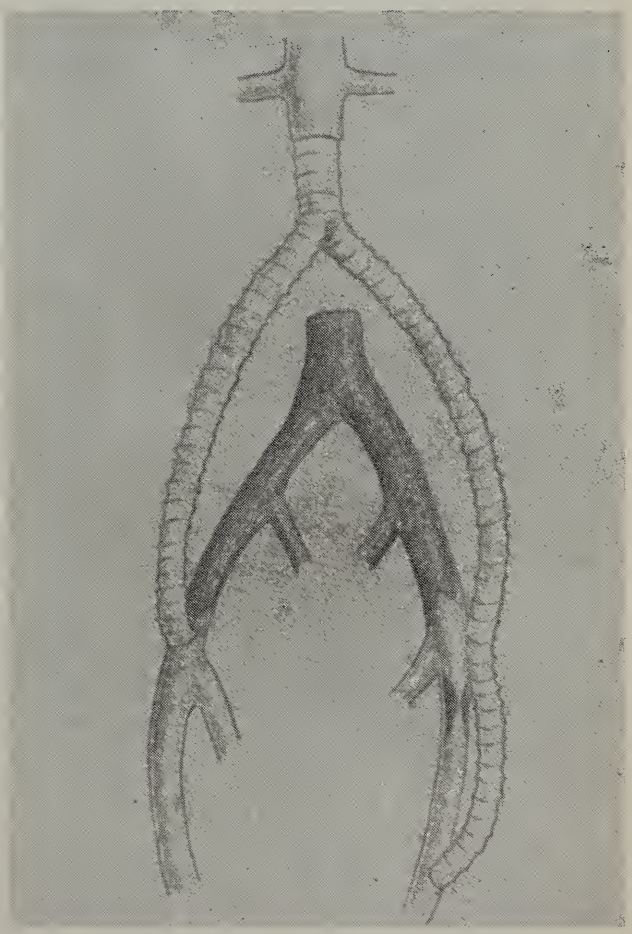


Figure 8: Case 9: Graft extends from just below renals to femoral artery on right and to femoral and popliteal on left.

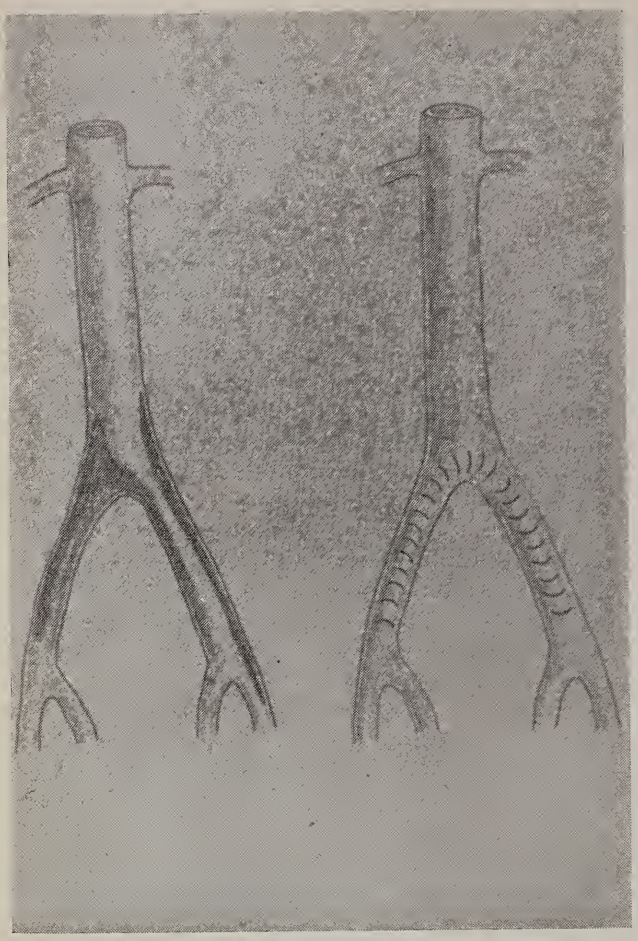


Figure 9: Case 11: Sketches showing pathology encountered and appearance after endarterectomy.

city November 15, 1958. On her fifth postoperative day she developed coldness and numbness in the right leg. The following day the leg became cyanotic and mottled and the left femoral pulse became weak. It was considered inadvisable to move her and an operation was performed at her hospital, although no grafts were available. Exposure of the aortic bifurcation revealed a long core of old arteriosclerotic plaques and thrombotic material extending from the lower aorta to the iliac bifurcations. Below this point the arteries were soft on both sides. There was superimposed fresh clot in the lower aorta, completely occluding the right common iliac. Long arteriotomies were made from the lower aorta to the iliac bifurcations and through these incisions, complete endarterectomies were done, removing all material from the bifurcation and iliacs. After the incisions had been meticulously closed with fine silk, removal of the clamps resulted in excellent flow through both vessels (figure 9). At the present time, two years later, excellent blood flow and peripheral pulses remain, and she has recently returned from a mountain climbing trip in Colorado.

Summary

The aorta and its major branches are subject to localized or segmental arteriosclerotic changes, which frequently result in aneurysm formation or partial to complete occlusion.

Unless there are compelling contraindications, aneurysms should be excised when found. It has been estimated that fifty per cent of aneurysms will rupture within a year of discovery.

Occlusive disease of the major branches of the aorta may be treated by endarterectomy, excision and graft replacement, or bypass graft, with excellent expectations of a good result.

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MEDICAL CENTER

Message from the Dean

Medical biostatistics today embraces not only the extremely important areas of vital statistics and sampling survey methods related to epidemiologic investigations, but includes the rapidly developing area of experimental statistics, so valuable to the basic scientist and clinical investigator.

The Biostatistical Unit of the Department of Preventive Medicine and Public Health is in its fourth year of operation under a five-year National Institutes of Health training grant. The Unit has assembled a staff of trained and diversified personnel to render service to research workers, to conduct their own studies, and to train others in medical biostatistics.

The Unit has fulfilled requests from every department of the School of Medicine—whether these requests were for individual consultation on designing experiments and evaluating data, or whether they involved full scale participation in research programs.

In separate investigations, Unit personnel have crossed disciplinary lines and established that certain statistical techniques useful in industry and in other sciences have application in medical research.

In order to serve the needs of a modern medical center, a biostatistical unit must have a full-time staff of statisticians, programmers and key punch operators, as well as consultants in statistical theory and methodology. It must have adequate laboratory equipment, space, and facilities.

There is every reason to believe that if the Medical Center unit continues to grow, it will have a full complement of trained personnel and laboratory statistical facilities that can not only meet the increasing demands of the Medical Center, the State Department of Health and the FAA Civil Aeromedical Research Institute, but also can serve as a regional center of medical biostatistics, as consultant, service organ and training center.

The Unit will continue to make use of the best talent available in the state. The present staff of biostatisticians and predoctoral candidates is enriched by consultants from the University of Oklahoma, Oklahoma State University and the Statistics Section of the State Department of Health.

The personnel is constantly striving toward a goal of being able to render local and regional training, consultation and service to satisfy the ever expanding demands of the academic medical sciences and the medical profession at large in this very significant area of modern medicine.

Mark R Everett

Clinical Pathologic Conference*

STEWART WOLF, M.D.**

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Case Presentation

Patient: F. B. C., 21 year-old white female.

Chief Complaints: Dyspnea, orthopnea and dependent edema.

Present Illness: Eight months ago the patient noted a mass in the upper abdomen, hard, stretched and most prominent in the epigastrium. There was a constant ache which spread over the left side of the chest, across the back, and below the shoulder joints. She was nauseated and vomited frequently after the ingestion of food. Her physician made a diagnosis of enlarged liver and she was hospitalized for two weeks in Bakersfield, California. Treatment at that time was uncertain. One month later she was again hospitalized for about eight days, and again three months later for two weeks. She returned to Oklahoma the following month. Ten months ago she had noted a decrease in strength and endurance which had progressed up until the time of her admission to the University Hospital one month ago. She had always slept on two pillows and by the time of her admission here she could breathe only in a practically upright position.

Past History: The patient was first admitted to University Hospital three years ago with a tentative diagnosis of subacute bacterial endocarditis, secondary to coarctation of aorta, rheumatic heart disease, or aortic stenosis. She had been told previously by various doctors that she had "leakage of the heart." Blood cultures at that time (on three occasions) all revealed growth of *Staphylococcus albus*. She was treated with penicillin, salicylates and bed rest. For most of the time during which penicillin was administered she continued to have a moderately elevated temperature, and it was thought that response to treatment was slight. Five days before penicillin was discontinued, treatment with sodium salicylate was instituted. Temperature returned to normal and about 15 days after administration of salicylates was begun the sedimentation rate was 4-8-14-19; three days previously it had been 8-15-20-25. The last previous sedimentation rate, before either penicillin or sodium salicylate was begun, had been 11-25-36-45. Joint pains, which had been intermittently present during her stay in the hospital disappeared after salicylate therapy. She was discharged two months later with a diagnosis of acute rheumatic fever based upon the clinical course and response to therapy. Sixteen months later she had a therapeutic abortion and partial hysterectomy at two months gestation.

Physical Examination: At the time of admission a month ago the patient appeared thin, pale, undernourished and well developed. Respirations were short, shallow, and the respiratory rate was 30. There was no point of maximum cardiac impulse. There was a systolic thrill in the midclavicular line to the anterior axillary line along the fifth

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and sixth intercostal spaces. There was a blowing systolic murmur and rumble partially replacing the first sound in all valve areas, but most marked in the aortic area. There was a diastolic murmur toward the apex and in the third and fourth intercostal spaces to the left of the midclavicular line. A systolic murmur was also heard in the left chest posteriorly. The cardiac rate was 120 with occasional irregularities. There was a firm, tender, regular mass filling most of the epigastrium. The liver was questionably palpable, 1 to 2 cm. below the costal margin. There was 3+ pitting edema of the sacral region. The blood pressure in the right arm was 155/90 and in the left arm 155/130.

Laboratory Data: On the second hospital day the urine was straw colored, clear, had a pH of 6.0, sp. gr. 1.013, contained a slight amount of albumin, no glucose, a few flat epithelial cells and 0-2 WBC's/h.p.f. On the second hospital day the blood contained 14.5 gm. Hb., RBC's 4,750,000, WBC's 4,650 with N 62 (stabs 2), L 37, M 1. The NPN was 43 and the sedimentation rate 0-0.5-1-2. Roentgenologic studies of the chest on the fourth hospital day were interpreted as showing cardiac enlargement and pulmonary congestion. Fluoroscopic studies five days later revealed enlargement of the heart with fairly good pulsation. The aorta was fairly well visualided. There were dancing shadows in the hilar region. Esophageal studies revealed marked enlargement of the left auricle. The findings were interpreted as being those of generalized cardiac enlargement and pulmonary congestion, most likely due to mitral heart disease. Electrocardiographic findings on the third hospital day were interpreted as complete left bundle branch block with the heart in vertical position.

Clinical Course: The patient was treated with bed rest, sedation, diuretics and digitoxin. She was discharged on the 20th hospital day considerably improved with instructions to follow a low salt diet, to restrict activities, and to continue taking digitoxin and ammonium chloride. The diagnosis at the time of discharge was rheumatic heart disease, inactive, with aortic stenosis and regurgitation, and mitral stenosis and insufficiency. It was also thought that she had reflex pylorospasm and cardiospasm. Seventeen days after the previous discharge, she returned to the hospital with a history of dependent edema, orthopenea and dyspnea, progressively increasing for about one week. She was also disturbed by the newspaper reports of the toxicity of a salt substitute which she had been using. She received essentially the same treatment as at the time of the previous admission but did not respond. She had nose bleeds and possibly hemoptysis. Crackling rales were heard over both lung fields, and there was pulmonary dullness at the bases. Urinary output was scanty and there was cyanosis. At about 7:35 p.m. the patient became apprehensive and began to spit up blood. She asked for a drink of water, and while it was being held to her lips she suddenly stopped breathing. Artificial respiration was of no avail, and she died at 8:00 p.m. on the third hospital day.

Differential Diagnosis

Doctor Wolf: I'm afraid that this sounds like a case where 50,000,000 Frenchmen can't be wrong, but I think I'm going to disagree, in part at least, with the majority opinion.

This patient is a 21-year-old girl whose chief complaints were dyspnea, orthopnea, and dependent edema. Certainly this focuses our attention immediately on the cardiovascular system and makes it virtually sure that we are dealing with a patient who is suffering with congestive heart failure. The issue is: what's wrong with the heart.

The present illness actually begins 10 months ago when she noted a decrease in strength and endurance which had progressed up until the time of her death. There is some indication that this patient may have had orthopnea prior to this time because she is said to have always slept on two pillows. In any case, at the time she was admitted to the hospital she had severe orthopnea. Eight months prior to admission the patient noted a mass in the upper abdomen which was hard, stretched, and most prominent in the epigastrium. I wasn't sure what "stretched" meant. I thought of sub-

stituting a few other words. It would be very interesting to know what the mass did. Perhaps the most interesting thing to know would be whether it pulsated or not. I don't think "stretched" would have been put in there instead of "pulsated." In any case, it was firm and tender. There was a constant ache which spread over the left side of the chest, across the back, and below the shoulder joint. She was nauseated, vomited frequently after the ingestion of food. Her physician made a diagnosis of enlarged liver. She was hospitalized for two weeks. It is difficult to know what the physician at that time thought her enlarged liver might be due to. He apparently assumed, or determined, that this mass in the epigastrium was indeed liver and if it was tender, enlarged, and had been there for a relatively short time, he might have thought she had hepatitis, although nothing was said about her being icteric. Certainly the nausea and vomiting, an deven the pain, which doesn't sem too well defined, could go along with her having hepatitis. At least he didn't consider this a malignant lesion because she was discharged and had to be hospitalized again and again. Although no mention is made of peripheral edema or dyspnea at the time of this hospitalization in California, it seems fair to assume that this enlargement of her liver, presumably, was accompanied not only by nausea, but also by dyspnea, and perhaps peripheral edema. It is apparent we do not know too much about this hospitalization because it is said that treatment at that time was uncertain. This gives us more than the usual license to read into the story what may have been done at that time.

In the past, the patient had been admitted three years before and one wonders whether this present illness did not extend back into that time. She was first admitted to University Hospital three years ago, the tentative diagnosis of subacute bacterial endocarditis — a straightforward enough diagnosis, but the basis for the cardiac deformity where the endocarditis was planted, was uncertain, apparently. It may have been coarctation of the aorta. It may have been rheumatic heart disease, or it was thought perhaps to be aortic stenosis. She had been previously told by various doctors that she had a "leakage of the heart." Here it might be helpful to again pause and attempt to read into the picture what people may have been thinking about back three years ago. If we could do that logically it might make the problem of the present admission much easier. I note particularly in this past history that although she had been told by many observers in the past that she had "leakage of the heart," she had not been cyanotic. This is a very important item, of course, because we must entertain the possibility that this patient had congenital heart disease. If she had congenital heart disease, depending upon the nature of the anomaly, she might have been syanotic at one time in her life. The fact that it is not mentioned, however, would not allow us to weigh this possibility. Why was it difficult to make a differential diagnosis between coarctation of the aorta and rheumatic heart disease, presumably with aortic stenosis. I think this probably means that there was a loud systolic murmur and it probably was heard in the back as well as over the precordium. When we get down to the present story, there is still a loud systolic murmur. If there had been notching of the ribs, there wouldn't have been so much question about her having coarctation of the aorta. Apparently her blood pressure was elevated at this time, although this isn't stated. It is unlikely that a diagnosis of coarctation would have been seriously entertained had her blood pressure not been elevated. Although we do not have that information from the earlier admission, I think we can at least read this much into it.

Blood cultures on three occasions revealed a growth of *Staphylococcus albus*. She was apparently febrile at this time, although we do not know how long she was febrile. It states her temperature returns to normal but it never says when it went up. It must have been up if it returned to normal. Was the *Staphylococcus albus* indeed a subacute bacterial endocarditis, or was it a contaminant? Unfortunately, it is common for both. In some series of subacute bacterial endocarditis, there have been as many as a third of the patients from whom *Staphylococcus albus* was recovered, ordinarily a nonpathogenic organism, and very common contami-

nant. I think with three different occasions with a positive blood culture it would be hard to assume that this patient did not have a blood stream infection and if she had it in the presence of obvious valvular or chamber deformity in her heart, certainly it would be hard to get away from a diagnosis of subacute bacterial endocarditis. In any case, she was treated with penicillin, salicylates, and bed rest. For most of the time penicillin was administered alone. She had a moderately elevated temperature and it was thought that response to treatment was slight. It would depend upon many factors whether we could say that her penicillin therapy had been vigorous enough or long lasting enough to have been expected to eliminate the organism and the infection. In any case, those who took care of her weren't satisfied. They were particularly troubled by the fact that this patient responded apparently rapidly to salicylates. The temperature returned to normal and about 15 days after administration of salicylates the sedimentation rate was 4-8-14-19. Three days previously it had been 8-15-20-25. I assume that these are 15 minute time intervals. Prior to the penicillin and sodium salicylate the sedimentation rate had been higher—11-25-36-45. Joint pains, which had been intermittently present during her stay in the hospital, apparently not very prominent, and, if we wanted to waive them we probably could, disappeared after the salicylate therapy. This is an equivocal situation. The patient may have had an SBE, may have had active rheumatic fever. It would help us a good deal if we knew what the murmurs were at this time and particularly if we knew what changes took place. It would also help us if we knew what the electrocardiographic tracings showed at this time because evidence of acute rheumatism might have been present in the electrocardiogram, but in any case we don't have that information. Sixteen months later she had a therapeutic abortion, at two months gestation, and a partial hysterectomy. There would probably be a good wide range of how serious a cardiac lesion might have led to a therapeutic abortion, from one physician to another, and the presence or absence of congestive failure would have been important. We don't know about that but the doctor who took care of her thought she had serious enough heart disease to make it dangerous for her to continue with her gestation. That means quite a bit, because patients with serious congenital and rheumatic lesions, as many of you have seen, may do extraordinarily well with skillful management during pregnancy and labor. At the time of admission a month ago the patient appeared thin, pale, undernourished and well developed. Respirations were short, shallow, and the respiratory rate was 30. It was evident that the patient was dyspneic at the time. There was no point of maximum cardiac impulse. There was a systolic thrill in the midclavicular line to the anterior axillary line along the fifth and sixth intercostal spaces. This brings up, I think, an important point as far as writing histories is concerned. It is difficult to evaluate from the statement, there was no point of maximum cardiac impulse, whether or not the impulse was diffuse but forceful, or whether it was rather dense and not obvious. This is an enormously important point. You or I might have written in the chart, meaning that the impulse was forceful, but diffuse, that there wasn't any point of maximum impulse or there were diffuse areas of maximum impulse. I prefer to elect the former interpretation, since it is necessary to take your choice, because of the presence of a thrill. At this point there was a blowing systolic murmur and a rumble partially replacing the first sound in all valve areas, but most marked in the aortic area. This was the reason for the confusion earlier in trying to decide the nature of this individual's heart disease. It wasn't possible to localize these murmurs to one spot. There was a diastolic murmur toward the apex and in the third and fourth intercostal spaces to the left of the midclavicular line. A systolic murmur was also heard at the left chest posteriorly. This, as we mentioned, might have had something to do with this thought about coarctation.

One piece of information which would help us a good deal in the auscultatory findings of the heart is left out. That is the P_2. It would help us to know whether or not this was accentuated. We will hold that in abey-

ance. The cardiac rate was 120 with occasional irregularities. It is hard to tell exactly what that means, but it could mean that the patient was in normal sinus rhythm with extrasystoles or there may have been a sinus arrhythmia. It hardly seems likely that the patient was coming in and out of fibrillation or flutter, under these circumstances. Again, this would be a helpful piece of information. The next one is the stunner here. There was a firm, tender, regular mass filling most of the epigastrium. The liver was questionably palpable—1 to 2 cm. below the costal margin. This must have meant that the observer who looked after this patient decided that the epigastric mass was not liver, and yet no diagnostic studies were directed toward uncovering the nature of this mass. Further steps were taken, the individual was discharged, and readmitted. So I prefer to assume that in the frailty of human nature the mass did not come down very far in the anterior axillary line on the right, but filled the epigarstrium and was probably called liver. Because if we make any other assumption we've got to drag in a whole series of diagnostic possibilities that have to be considered in relation to heart disease. If this were an infant we would think, of course, of von Gierke's disease but such time consuming considerations would not be warranted in this conference because it must have been assumed all along that this patient was having primarily heart disease, and that this must have been the liver all along. There was a 3+ pitting edema in the sacral region. The blood pressure was 155/90 in the right arm and in the left arm 155/130. If coarctation was considered, we'd be enormously interested in the blood pressure of the legs. It is very unfortunate and considerably hampers our discussion that the blood pressure in the legs was not recorded. In fact there is not even a note about pulsations in the legs. Were these observations made? I think we must assume that blood pressure in the legs was taken and that it was found to be appropriately higher than that in the arms. On the second hospital day the urine was straw colored, clear, pH of 6; nothing remarkable about the urine except that there was a slight amount of albumin. Nothing remarkable about the blood count, and the NPN was elevated to 43. The sedimentation rate was relatively slow. Now we get to one of the most interesting aspects in the problem because certainly in deciding whether this patient has congenital or rheumatic disease, or some other type of heart disease, the x-ray is going to be helpful to us. Roentgen studies of the chest on the fourth hospital day were interpreted as showing cardiac enlargement and pulmonary congestion. Actually, this doesn't help us at all because we already know from the physical examination that the heart is large and the lungs are congested. The aorta was fairly well visualized. It's hard to evaluate what the term "fairly" covers. So again we do not get much help.

Fluoroscopic studies five days later revealed enlargement of the heart with fairly good pulsation. This implied that the pulsation might not be too good, if not, why wasn't it? There would be two prominent possibilities, of course. One would be fluid in the pericardium to explain the large shadow. The other might be that the individual had a constrictive pericarditis. Under these circumstances the heard shadow might be enlarged. It seems unnecessary to assume that the pericardium had fluid in it and if this patient had a constrictive pericarditis certainly the most prominent feature here would be ascites, and this patient has no ascites, at least, none was detected. It said there were dancing shadows in the hilar region. This is a terribly important observation and is suggests that the force of ejected volume of blood with each beat from the right side of the heart was exaggerated. There are one or two conditions in which a hilar dance is a characteristic finding. So we would be very interested in this, but what information would we like to have? Esophageal studies revealed marked enlargement of the left auricle—a very important item. The findings were interpreted as being those of generalized cardiac enlargement and pulmonary congestion, most likely due to mitral heart disease. There are a couple of other things we would like to know about the description of the heart in the chest x-ray. Perhaps the most important would be the relative size of the pulmonary artery shadow. Was this a mitral type of shadow? Was

is a very exaggerated pulmonary artery shadow?

The other thing we would be interested in would be the description of the aortic knob, not only for the purposes of evaluating the possibility of coarctation, but other congenital anomalies that might be associated with aortic knob disturbance, I think you can see the aortic knob and I think you can see a substantial prominence in the region of the pulmonary artery. It's not greatly exaggerated and sticking out like a curtain. Certainly you would agree with the roentgenologist's interpretation that this showed a generalized enlargement of the heart chambers. It looks as though the aorta may be somewhat dilated. This is a rather wide shadow for a 21 year old girl. I do not think I can do much more with that picture. Certainly the pulmonary markings are not missing or reduced in amount. This is the first hospitalization and you see considerable increase in the size of the heart. Again the pulmonary artery segment is not so huge as to be really diagnostic, of course.

So, an electrocardiogram on the third hospital day was interpreted as a complete left bundle branch block with the heart in vertical position. We don't have evidence as to whether this heart showed a right axis or not, in this or previous electrocardiograms. Of course this would also be of considerable importance in helping us decide what is wrong with this heart.

Now, the clinical course. The patient was treated with bed rest, sedation, diuretics and digitoxin. She was discharged on the 20th hospital day considerably improved with instructions to follow a low salt diet and continue using digitoxin and ammonium chloride. The diagnosis on discharge was rheumatic heart disease, inactive, with aortic stenosis and regurgitation, mitral stenosis, and insufficiency. It is difficult for me to go along with this diagnosis. One thing, it makes me feel more comfortable about throwing this epigastric mass out because still nobody is impressed with this and takes it seriously, so I think it must be an enlarged liver, but the blood pressure readings make it awfully difficult to buy aortic stenosis. You would expect a smaller systolic pressure; of course, the difference between systolic and diastolic might be broad, in view of the accompanying aortic insufficiency. It is also felt that she had reflex pylorospasm and cardiospasm. I'm not sure what to make of that so I will go on to the next sentence. Seventeen days after the previous discharge she returned to the hospital with a history of dependent edema, orthopnea, dyspnea, progressively increasing for about a week. Here is an individual whose myocardium can no longer support its load and she is getting to a terminal stage. She can not be kept out of congestive failure, either because of myocardial disease or because of mechanical embarrassment or a combination of both. She was also disturbed by these reports of the salt substitute. She received essentially the same treatment as previously, but this time did not respond. Here I don't think we're too surprised. Here is an individual with severe heart disease which apparently has been progressing over a relatively short period of time—three years, more or less, it is hard to say—had been nervous for a long time but things have certainly been getting a lot worse recently and she was close to the end of her reserve. Then she had frequent nosebleeds and possibly hemoptysis. In the presence of these nosebleeds it might make you think that rheumatic activity is present if, indeed, this patient has rheumatic heart disease. Many people, as you know, feel that in the presence of congestive failure individuals with deformities from rheumatism in their heart, activity usually is an accompaniment. But certainly she had a good deal of venous engorgement and if she did have pulmonary congesttion she had every reason to have hemoptysis. Again crackling rales were heard over the lung fields and there was apparently liquid at the lung bases. The urinary output was scanty and the patient was cyanotic. I think that the scanty urinary output could certainly be explained on the basis of congestive failure and defective renal blood flow—one would have to consider in such a person the possibility of thrombi or emboli involving renal vessels, but I think it is unnecessary to invoke these perfectly good possibilities although they are not uncommon in the presence of severe anasarca and chronic congestive failure. So one would not be surprised to see intravas-

cular thromboses turn up, but we don't get any word about the urine that would help us along this line. About 7:35 the patient became apprehensive and began to spit up blood. This is, of course, why many of the students suggested that the patient had a pulmonary infarction and again, this would be reasonably common, either on the basis of intravascular thrombosis of the leg with pulmonary embolus, or on the basis of an anasarcous debilitated individual such as this, of thrombosis in the lungs in situ. Either of these might have occurred perfectly well. Artificial respiration was to no avail and she died at 8:00 p.m.

Now, what's wrong with this individual? What among the various possibilities is the most attractive? Well, if we had heard that this girl had been cyanotic as an infant, we certainly would entertain the possibility of congenital heart disease; and, an individual who had cyanosis as a youngster, cyanosis went away, would certainly suggest the possibility suggested by one or more of the group of Lutembacher's syndrome. Lutembacher's syndrome, as you know, is an atrial septal defect with an associated deformity of the mitral valve. I'm not sure whether the deformity of the mitral valve is a congenital anomaly or whether associated rheumatic infection, or whether it may be both, but certain it is that individuals who have Lutembacher's syndrome are not only subject to the development of subacute bacterial endocarditis which this patient may very well have had. I think she probably did. But also they are very prone to develop rheumatic infections as well. They may have involvement of other valves besides the mitral. So, it's easy to see why this might have been an attractive possibility. I think the way we'd decide whether this was congenital heart disease or a rheumatic infection, or both, as one might say, if one made the diagnosis of Lutembacher's syndrome, would depend upon which of these various findings you lean on most heavily. Suppose the patient had mitral stenosis, straightforward mitral stenosis with rheumatic heart disease. What's missing here? Well, in the first place we don't have a decent description of a loud first sound, strong apical impulse, and a presystolic rumble. We have a sort of an evasive description of rumbles in all areas and not a clear picture of a mitral stenosis. This is undoubtedly why it wasn't easy for those who saw the patient to simply say this patient has rheumatic heart disease with mitral stenosis. Suppose the patient had rheumatic heart disease with mitral stenosis and also aortic insufficiency and stenosis. There again we don't have a clean cut description of this. The diastolic murmur as described is not very characteristic of aortic insufficiency. She's got a systolic thrill over the apex and a systolic murmur there which apparently could be heard in all valve areas, and especially in the back. When one gets very loud systolic murmurs with flagrant distribution over the precordium with great difficulty in localization in an individual who never had initial history of rheumatism; and when we have no history of when she didn't have a cardiac murmur, I think we can think strongly of congenital lesions despite the fact that we have no word that she was cyanotic in infancy or childhood and despite the fact that we do not have any word that she had reduced activities. My choice would be to say that this patient has fundamentally a congenital heart lesion of the Lutembacher type, and superimposed on this she has a mitral stenosis which is probably the result of an associated rheumatic infection. I also think that the evidence for her having had a subacute bacterial endocarditis is too good to waive. I think she died with a chronically engorged liver with widespread evidences of passive congestion, congestive failure, and probably thromboses or emboli in the lungs.

Pathological Discussion

Doctor Jaques: Thank you, Doctor Wolf.

At the time of autopsy the peritoneal cavity contained approximately 350 ml. of clear fluid. The liver was small and did not extend below the costal margin. There was fusion of the kidneys, producing a horseshoe kidney, with the ureters coming off anteriorly. This probably accounts for the epigastric mass. The pleural cavities revealed an obliterative pleuritis and there was no fluid in the pleural cavities.

The heart was definitely enlarged, weighing 500 gm. The venous return to both sides

was normal as was the origin of the great vessels at the base of the heart. When the heart was opened there was dilatation and hypertrophy of the chambers of the right side, the right ventricle measuring 10 mm. Anything above five would certainly be considered to be above the normal range, although some people consider three the normal range. As the left side of the heart was opened the mitral valve showed a suggestive area of slight thickening. This was equivocal according to the protocol. There was no interatrial or interventricular septal defect; the aortic valve, however, was markedly narrowed and was described as thick and calcified.

As we said, the pulmonary artery came off divided into its two branches. The aorta pursued its course for the first 3 cm. where there was a large orifice coming out and then a circuitous channel which has been interpreted to represent the persistence of the right aortic arch. As one continued along the aorta, the innominate, the left carotid, the left subclavian arose normally. Then there was a large ductus arteriosus measuring 2 cm. in diameter and approximately 1.5 cm. in length. Just proximal to this there was an adult form of coarctation of the aorta. There was no great evidence of any collateral circulation at the time of autopsy.

The lungs were heavy, they were atelectatic, and showed a profound degree of congestion. There was marked edema associated with this and also focal areas of hemorrhage which apparently accounted for the hemoptysis noted terminally.

The spleen weighed 140 gm. and was not remarkable. The liver, as we mentioned, was small, weighing 1040 gm., yellow in color, but on microscopic examination the slides showed fatty metamorphosis. It did exhibit a marked degree of acute centrolobular congestion with focal necrosis of the centrolobular parenchymal cells. The kidneys, as we said, were fused into one mass, they weighed 320 gm. and measured 15 x 15 cm.—to give you an idea of the size. Upon microscopic examination there were subtle changes in the tubules consistent with hypoxia. This would seem to have been going on for some time, as evidenced in a few areas by regenerative phenomena in the tubular epithelium. The adrenals showed cortical adenomatous hyperplasia. The uterus had been removed supracervically. The tubes and ovaries were not remarkable. The appendix had been removed. Permission for examination of the brain had not been granted.

I think we have here an interesting case of a congenital heart disease in which the salient features were an adult form of coarctation of the aorta associated with a patent ductus arteriosus and certainly one of the most interesting features was the persistence of the right aortic arch which normally loses its connection with the dorsal aorta. It is usually the left arch that forms the arch of the aorta. There were numerous congenital deformities. Is there any rebuttal, Doctor Wolf?

Doctor Wolf: I'd be interested in knowing whether or not we have the information about the blood pressure in this patient's legs. My trouble is that I'm not sure I wouldn't make precisely the same mistake again. I don't see what in the story, except the hypertension, might lead to the correct diagnosis. I thought she did have a congenital heart lesion—the long standing murmurs and the possibly long standing orthopnea would indicate congenital heart lesions. I think perhaps the trickiest aspect of this case, and maybe this ought to be pointed out, is that coarctation of the aorta cannot be diagnosed unless one has either radiographic proof or an absence of blood pressure in the leg or pulsations in the leg. The fact that these weren't recorded is a serious omission. That's the major lesson in this case. But coarctation is not featured by murmurs. One may have a systolic murmur. It may be heard very widely. Often coarctation is unaccompanied by a murmur. Collateral circulation one looks for. The tricky part of this case is that not only was there coarctation but also a patent ductus. I do not think I've ever seen that combination before and it was a patent ductus that gave us the systolic and diastolic murmurs. I'm afraid I'd make the same error again.

Doctor Jaques: There's an interesting feature. The aortic valve was merely described as thickened, calcified and distorted. Although I think it brings out a good deal of conjecture. First of all, we know according to Maude Abbott series[1] that approximately 40 per cent of individuals who have coarctation also have a bicuspid aortic valve which is frequently deformed. This is the first thing that came to my attention, although from reading this 1949 protocol I could not sell myself this was it. Another possibility might be that it represented a three cusp aortic valve to perhaps have been the seat of subacute bacterial endocarditis with healing and to have produced this distortion. Certainly the finding of calcific aortic stenosis, as such, depends a great deal upon all you read. For example, Karsner and Kaletsky[2] in their monograph state unequivocally that practically 100 per cent of these represent healed rheumatic lesions. Yet, I think in the absence of any real mitral valve disease, this would militate in this instance against the feeling that this was rheumatic. Another possibility that certainly should be entertained is so-called nonbacterial thrombotic endocardiosis as described by Angrist and Marquiss[3] in which there are deformities, and this seems to be much more common since 1945. He thinks perhaps this may again represent a healed bacterial endocarditis, but the exact etiology I can not elucidate further and, unfortunately, no sections were available for study of the aortic valve area.

Final Anatomic Diagnosis

Coarctation of aorta with patent ductus arteriosus.

Persistence of segment of right aortic arch connecting the ascending portion with distal part of the arch containing laminated thrombus in dilated portion.

Calcified aortic valvulitis with stenosis.

Healed mitral endocarditis, slight.

Cardiac hypertrophy and dilatation.

Chronic passive congestion of viscera with marked fatty change in liver, ascites, hydrothorax, bilateral, and hydropericardium, slight.

Pneumonia, focal, confluent, bilateral.

Horseshoe kidney.

Ancient scar of operation: appendectomy and subtotal hysterectomy.

Cervicitis, chronic, slight.

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ABSTRACTS

A Case of Probable Tuberculosis Of the Distal Colon

EVERETT R. RHOADES,* L. J. KLEIN** and JACK D. WELSH***

Gastroenterology, 38: 654-658, April 1960

A case of pulmonary tuberculosis with probable secondary gastrointestinal infection involving only the splenic flexure and proximal descending colon is presented.

The frequency, symptomatology, diagnosis, manifestations and therapy of this condition are discussed.

*Resident in Medicine, University Hospitals.
**Medical Resident.
***Instructor in Medicine.

Histochemical Use of the Cynaocarbon Organic Compounds

J. F. LHOTKA*

Nature 184: 1153-1154, 1959

Histochemical localizations associated with tissue protein components may be obtained in formalin fixed, paraffin processed sections treated for 2 hours in 0.5 to 2% solutions of tetracyanoethylene in tetrahydrofuran, ethyl acetate dimethylsulphoxide, or dimethylformamide. Tetracynoethylene is a very actve compound and may well have possibilities as a localizing agent in other than protein reactions.

*Associate Professor of Anatomy.

Cryofibrinogenemia

JOHN M. KALBFLEISCH,* and ROBERT M. BIRD**
New England Journal of Medicine, 263: 881-886, 1960

Five patients with neoplastic disease and a hemorrhagic diathesis were shown to have a cold-precipitable plasma protein that migrated electrophoretically in a manner similar to fibrinogen and had the clottable properties of fibrinogen. In vitro tests suggested that the cryofibrinogens also possessed some prothrombin and accelerator-factor activity.

The frequency of the development of a cryofibrinogen may exceed that of the cryoglobulins. It is urged that screening procedures for cold-precipitable proteins use both plasma and serum rather than serum alone.

The suggestion is made that cryofibrinogenemia has a role in the clinical paradox of intravascular clotting appearing simultaneously with a hemorrhagic diathesis.

*Resident in Medicine.
**Associate Professor of Medicine and Physiology.

Open Versus Closed Left Atrial Drainage During Cross-Clamping Of the Thoracic Aorta

DAVID D. SNYDER,* G. RAINEY WILLIAMS**, and GILBERT S. CAMPBELL***
The Journal of Thoracic and Cardiovascular Surgery 39: 634-639, May 1960

Comparisons were made between open and closed left atrial drainage, during left atrium to femoral artery bypass, in 13 dogs with thoracic aorta cross-clamping. At the same pump flow settings, open drainage yielded greater left atrial drainage with larger and consistently reliable flow volumes to the distal aorta. These differences were magnified in hypovolemic dogs. Mechanisms for differences between open and closed drainage are discussed.

*Resident in Surgery.
**Assistant Professor of Surgery.
***Professor of Surgery.

A New Approach to Fluid Therapy of The Severely Burned Patient

JOHN A. SCHILLING,* H. EARL GINN,** WILLIAM R. RICHARDSON,*** and HAROLD E. DUNLAP****
Annals of Surgery, 150: 756-767, October, 1959

1. Four severely burned patients were treated initially by Dextran, plasma, blood and 4 per cent urea in 5 per cent dextrose.

2. No formulae were employed. Dextran, plasma, and blood were administered in amounts sufficient to maintain a normal pulse and blood pressure. Four per cent urea in 5 per cent dextrose was administered in amounts that maintained a urinary output between 2 and 3 ml. a minute in the adult.

3. Approximately the same amounts of water, blood, plasma, and colloid were required as those suggested by the Brooke Army Hospital burn formulae. However, approximately one-third as much total electrolyte was administered, and the urinary output of water was approximately three times that predicted under the Brooke Army Hospital regimen.

4. The burned areas seemed drier, the patients responded more promptly to this regimen, and seemed to tolerate a total oral intake much more quickly than would be expected from past experiences with other regimens.

5. Initial and later care of the local burned area was not altered.

6. The results in these patients warrant further use and evaluation of this form of therapy.

*Professor of Surgery.
**Resident in Medicine.
***Professor of Pediatric Surgery in the Department of Surgery.
****Resident in Surgery.

The Experimental Production of Atrophic Gastritis Using a Preparation of Human Gastric Juice

W. O. Smith,* M. K. DuVAL,** W. JOEL*** and S. WOLF****
Surgery, 46: 76-82, July 1959

1. Human gastric juice from healthy volunteers contains a factor capable of inhibiting gastric secretion when given intravenously to dogs.

2. In dogs, twice weekly intravenous injections of human gastric juice results in atrophic gastritis, achlorhydria, and disappearance of parietal cells, within a 6-week period.

3. Progression of the atrophic gastritis was evident for 6 months, at which time all dogs were achlorhydric including those in which injections had ceased after 3 months.

4. The experimentally produced atrophic gastritis and achlorhydria were at least partially reversible.

*Assistant Professor of Medicine.
**Associate Professor of Surgery.
***Professor of Pathology.
****Professor of Medicine, Consultant Professor of Psychiatry, Neurology, and Behavioral Sciences.

Serial Determination of Serum Glycoproteins in Patients With Pulmonary Tuberculosis

HAROLD G. MUCHMORE,* JANE A. FAULKNER,** JAMES F. HAMMARSTEN,*** FRANCES G. FELTON,**** and GEORGE WINKELMAN*****
The American Review of Respiratory Diseases 81: 918-923, June 1960

Serial determinations of several serum glycoprotein fractions have been made in 43 male patients undergoing chemotherapy for active pulmonary tuberculosis. Initially, the values of the total serum glycoprotein, serum glycoprotein/protein ratio, the seromucoid, and the gamma-globulin glycoprotein were elevated to a significant degree above normal. These values, with the exception of the seromucoid, seem to be proportional to the extent of the inflammatory response. The presence of cavity, fever, previous treatment, reversal of infectiousness, or roentgenographic improvement did not influence the initial values. The total serum glycoprotein, seromucoid, and gamma-globulin glycoprotein values decresaed during antimicrobial therapy. The small group of patients with progressive disease showed less tendency to return toward normal. Determination of these substances provides an additional means to evaluate the response to therapy.

*Assistant Professor of Medicine and Preventive Medicine and Public Health, and Microbiology.
**Research Assistant.
***Associate Professor of Medicine.
****Assistant Professor of Research Microbiology.
*****Former Chief, Professional Service, Veterans Administration Hospital.

Book Review



"Psychophysiologic Approach in Medical Practice," by Doctor William W. Schottstaedt, chairman, Department of Preventive Medicine and Public Health, University of Oklahoma School of Medicine.

Doctor Schottstaedt has applied a rich background of psychiatric orientation to the practice of medicine. In designing this presentation of the elements of psychosomatic medicine he has meticulously simplified, carefully defined and painstakingly described his subject. Appropriate case reports are included to further simplify practical aspects of reactions to stressful stimuli of threatening significance. The mechanisms of physiological as well as mental sequelae to mental trauma are described in a concise and correlated manner, yet maintaining a clear and interesting style throughout.

Attention is directed toward the minute details of history-taking including deportment of the physician, mechanisms and sequences of effectively deriving information from the patient and utilization of facts gained from the interview. The physician is truly regarded not only as a prescriber or surgeon but in his full perspective as a teacher, confidant, confessor and friend. He must recognize psychological elements contributory to his patient's illness and can frequently deal effectively with such situations.

This volume is of great value in orienting the physician to this very practical and important aspect of his profession.—*Richard W. Payne, M.D.*

FACULTY NEWS

New Appointments Approved By Regents

George J. Friou, M.D., former assistant professor at Yale University School of Medicine, has been named associate professor of medicine at the School of Medicine. The appointment is one of five recently approved by University of Oklahoma Regents.

A 1944 Cornell medical graduate, Doctor Friou interned and took residency training at the New Haven Hospital. He was a James Hudson Brown research fellow in the Department of Medicine at Yale and had served on the faculty there since 1949. His research is concerned primarily with lupus erythematosus and related conditions.

Bernard Horn, M.D., chief of anesthesia at the Oklahoma City VA Hospital, was given the academic appointment of instructor in anesthesiology. He received his M.D. in 1953 at the University of California, interned at the Kaiser Foundation Hospital in Oakland, served a residency at Contra County Hospital in Martinez, California, and was in private practice in Elk City from 1955 to 1958. Doctor Horn has taken additional residency training at the OU Medical Center the past two years.

David K. Trites, Ph.D., chief, Selection Section, Psychology Branch, FAA Civil Aeromedical Research Institute, had accepted a part-time appointment as instructor of medical psychology in the Department of Psychiatry. He received his doctorate at the University of Texas; was a research psychologist at Lackland Air Force Base before moving to Oklahoma.

Others appointed to part-time teaching posts are Robert Lewis Kramer, M.D., Tulsa, clinical assistant in ophthalmology, and Vernon G. Ward, M.D., a fellow in internal medicine, given the title of clinical assistant in medicine.



does the bowel take kindly to no-bulk diets?

The bowel, designed to operate best under the stimulus of a bolus of waste, is seldom at rest under normal conditions. But the new bulkless liquid diets which have taken the country by storm, although they may be a useful road to weight loss, may also lead to constipation or bowel irregularities.

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PRESIDENT'S LETTER



The McCurtain Gazette, Idabel, Oklahoma, states in an article in its issue of January 14 that McCurtain county doctors have signed an agreement to accept Blue Shield fees as full payment for professional services, in other words a Service Contract. Doctor Thomas E. Rhea, M.D. is listed as the representative of the Participating Physicians. This makes a total of 14 counties in the State of Oklahoma which now have Service Contract plans in effect with Blue Shield. The counties and principal cities previously adopting such programs are Garfield county (Enid), Grant county (Medford), Rogers county (Claremore), Ottawa county (Miami), Craig county (Vinita), Delaware county (Jay). Beaver county (Beaver), Cimarron county (Boise City), Dewey county (Taloga), Harper county (Buffalo), Woodward county (Woodward), Alfalfa county (Cherokee), and Woods county (Alva).

In each of these counties the physicians themselves have petitioned Blue Shield to institute a Service Plan, and thus it must be assumed that the doctors in these areas favor this type of contract. Blue Shield is noncommittal on the type of program they prefer to sell and administer, but it appears fairly obvious that service benefit plans are to be desired on the part of the insuror if premiums can be kept to a level that still will be attractive to the public. As opposed to the Service Contract, an Indemnity Plan pays a specific amount for agreed upon procedures but the doctor is not bound under contract to accept the fee paid as his total charge to the patient.

It is interesting to note that doctors in the metropolitan area of Tulsa county apparently are vigorously opposed to service-type contracts. The Tulsa County Medical Society passed a motion at its August 17, 1960, meeting, which stated that the Tulsa County Medical Society shall reject all service contracts regardless of source of origin. The vote was unanimous at this particular meeting, with none of the physicians in attendance voting against the resolution. The Tulsa County Medical Society had previously turned down any type of service plan from Blue Shield by a vote of 123 to 6 at a meeting of the Society March 17, 1958. It is also to be noted that service plans are not in effect in Oklahoma county and in Washington county (Bartlesville), Kay county (Ponca City) and other more populous areas. Garfield county (Enid) is the largest population center in the State to adopt such a contract.

The growth of the service type plan in smaller communities and rural areas in this State is most interesting. Actually, the total number of actively practicing participating physicians in these 14 counties, including Garfield county, totals only 102, making a total of about 6% of the active practicing physicians in the State as far as can be determined from current figures. Reliable figures indicate that approximately 75% of the active participating physicians in the nation have signed up with one or another service-type contract.

Service plans obviously call for fee schedules and, of course, herein lies the crux of the problem. Whether the high percentage of specialists in the metropolitan areas make a pragmatic fee schedule prohibitive from the insuror's standpoint in his knowledge of the market for these plans is something that the Liaison Committee of the State Medical Association with Blue Shield is trying to settle at the present time. Many physicians seem to be opposed to Service Contracts on an out and out moral basis, stating that a physician must retain the right of billing his patients what he considers to be fair and just charges for the services performed.

This is, frankly, the most perplexing subject among a considerable number of problems confronting the medical profession in Oklahoma today.

The Service Contracts are apparently going to continue to grow in number. There was none in effect in this State until Garfield county adopted its program in August of 1958, and in the two and one-half year interim we have seen 13 more counties adopt this type of prepaid medical care. Lend your ear to every discussion on this subject and give it full thought. What is best for your community? Under what plan can you render the best care to your patients? It is difficult to have a discussion of this program among any sizeable group of doctors without considerable emotion entering into the expressions of opinion. We must keep these discussions deliberate, and make our decisions with the utmost equanimity.

Walter E. Brown, M.D.

WALTER E. BROWN, M.D.
President

Attend Your Annual Meeting

The Annual Meeting of your Oklahoma State Medical Association provides you with many once-a-year opportunities; the opportunity for a scientific refresher in subjects of interest to generalists and specialists alike; the opportunity to attend the meetings of the Association's policy-making body; and, the opportunity to attend various social and recreational events, all designed to promote good fellowship among the hundreds of physicians and wives who attend each year.

This year's Annual Meeting will be no exception. In fact, those who journey to Tulsa's Mayo Hotel for the May 7-9 meeting have several innovations in store for them.

First, the meeting will be shorter, in terms of time away from the office, since the scientific sessions will begin on Sunday morning and conclude Tuesday afternoon. Secondly, the traditional dinner-dance will be divided into two separate social events.

Here is a current rundown of Annual Meeting plans.

Business Affairs

Policy-making will begin at 1:30 p.m. Saturday afternoon with a meeting of the OSMA Council in the Mayo Hotel's Pompeian Court; followed on Sunday by the House of Delegates meeting at the same place, beginning at 10:00 a.m.

Delegates will be issued portfolios containing all committee reports, resolutions and other items of business. County societies have been asked to send resolutions to the OSMA Executive Office prior to April 1.

All OSMA members are welcome to attend, although only certified county society delegates may vote.

Scientific Program

Running concurrently with the House of Delegates session, the scientific program will begin Sunday morning at 10:00 a.m. in the Crystal Ballroom of the Mayo.

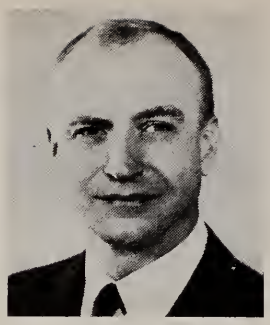
The program will feature presentations by twelve distinguished guest speakers, medical motion pictures, roundtable luncheons and symposia. A symposium on the economics of medicine will include Doctor F. J. L. Blasingame, Executive Vice-President of the American Medical Association, as a par-



Tulsa's Mayo Hotel will be the principal site of the association's business, scientific and social activities.



BLASINGAME



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ticipant. The discussion will be moderated by OSMA President Walter E. Brown.

Other guest speakers scheduled to date are: L. Henry Garland, M.D., Professor of Radiology, University of California, San Francisco; George E. Burch, M.D., Professor of Medicine, Tulane, New Orleans; Caroll B. Larson, M.D., Professor of Orthopedic Surgery, Iowa University, Iowa City; John I. Nurnberger, M.D., Chairman of the Department of Psychiatry, Indiana University, Indianapolis; Robert J. Prentiss, M.D., Urologist, San Diego; Patrick H. Hanley, M.D., Associate Professor of Proctology, Tulane, New Orleans; Wallace N. Jensen, M.D., Assistant Professor of Medicine, University of Pittsburgh; Paul A. di Sant-Agnese, Chief, Pediatrics Metabolism Branch, National Institute of Arthritis and Metabolic Disease, Bethesda, Maryland; David Hume, M.D., Professor of Surgery, University of Virginia, Richmond; and, U. S. Representative Dale Alford, Arkansas.



PAUL NEIGHBORS

Exhibits

Technical and scientific exhibits will be on display at the hotel. Featured again for the second straight year will be the "Klinical Kaleidoscope," a collection of bizarre cases presented by Oklahoma physicians. Applications for scientific exhibit space, including the bizarre case section, should be sent to the Exhibits Chairman, Tulsa County Medical Society, B-9 Medical Arts Building, Tulsa.

Awards will be presented to the best scientific exhibit and bizarre case exhibit.

Social Events

A change in the social program will see the President's Inaugural Dinner-Dance separated into a Monday night social hour and Inaugural Dinner, and a Tuesday night dance at the Mayo.

The dance will be held in the Crystal Ballroom, and will feature the Paul Neighbors' Orchestra. Entertainment and music will also be provided at the Inaugural Dinner.

Golf Tournament

The Annual OSMA Golf Tournament will also follow a new format. Doctors may golf at their own convenience on either Monday or Tuesday, May 8-9. The tournament will be held at Tulsa's beautiful Oaks Country Club, and winners will receive their awards at the Tuesday evening dance.

Tulsans Run Meeting

Doctor S. C. Lewis, Jr., is serving as General Chairman, with Doctor Donald L. Brawner as Program Chairman. Other committee members include Doctors Robert Jabour, E. Malcom Stokes, Byron L. Bailey and James W. Kelly. Arrangements are being handled by the Tulsa County Medical Society.

White House Conference Endorses OASDI Health Bill

As long predicted, last month's White House Conference on Aging turned into an all out melee over socialized medicine, with the liberal forces winning conference endorsement of a social security health bill.

Approximately 2,600 delegates assembled in Washington, D.C., on January 9th for the four-day session, covering twenty different subject areas pertaining to the plight of the nation's elderly. But from the beginning the spotlight was focused on the section meeting which dealt with the financing of health care costs.

Michigan's Senator MacNamara led off on the first day, before the section meetings began, by endorsing the use of the social security mechanism to finance health care, and then warned the general session that the meeting had been "rigged" by doctors (actually, only about 10% of the delegates were physicians).

Other principal speakers followed MacNamara's pattern, including such former Eisenhower notables as Marion Folsom and Arthur Larson.

The endorsement of the social security approach by these individuals undoubtedly influenced many of the delegates, particularly since the Eisenhower administration had long opposed such legislation. Ike himself addressed the group, saying his position was well-known, and unchanged.

The Section Meetings

With the stage thusly set, the participants went to their assigned section meetings to deliberate the twenty problem areas and draft policy statements.

Complete sets of the twenty policy statements are available at the OSMA headquarters.

As expected, the largest section meeting was the one on Income Maintenance (including financing health care costs). The 269 delegates who showed up were divided into seven work groups, where the issues were debated and voted upon.

"Contributory Social Insurance"

After all was said and done, the following majority and minority reports were approved on the health care issue:

" . . . Private voluntary effort and public assistance can contribute much to the solution of the problem of health care for the aged. However, they will continue to fall short of meeting the basic medical care needs of the aged as a whole. The majority of the delegates of Section 2 (by vote of 170 to 99) believe that the social security mechanism should be the basic means of financing health care for the aged.

"Establishment of a program of health benefits financed in the same way as OASDI cash benefits, would give the aged the assurance that the costs of essential health care will be met when their working years are over. The mechanism of contributory social insurance, under which contributions are made by workers during their working years will then provide health care to protect them in retirement. Such legislation would help to ease the problems of hospitals, public assistance programs and private philanthropy and would relieve voluntary insurance programs of the burden of carrying this high risk group.

"The minority believe that social security should not be used to finance health care; that such use would interfere with the physician-patient relationship; that it is unnecessary because of the potential growth of voluntary insurance; and that all needy aged can be cared for by public assistance through the recently enacted Federal program of health care for the low income aged. In addition they believe that the social security program should provide for cash benefits and not for services of various kinds."

Who Did What to Whom?

According to Doctor A. T. Baker, OSMA Past-President and delegate to the Income Maintenance Section, MacNamara's charges of "rigging" were directed at the wrong group. "Doctors were conspicuous by their absence in this section," he said, "while more than two thirds of the group chairmen, discussion leaders and recorders were affiliated with state and Federal welfare organizations and organized labor."

Doctor Baker reported that although the Supreme Court has ruled that Social Security is a tax, the delegates were forced to refer to it as "contributory social insurance." He also said that dividing the delegates into sections and work groups resulted in a sort of "gerrymandering." He pointed out that the "majority report" of this sec-



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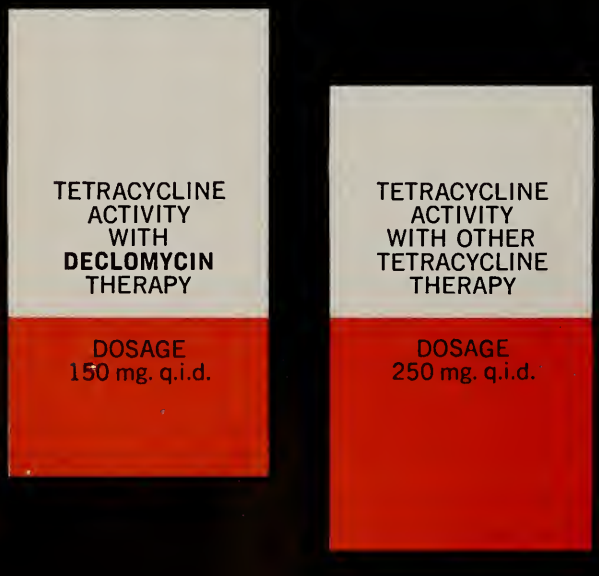
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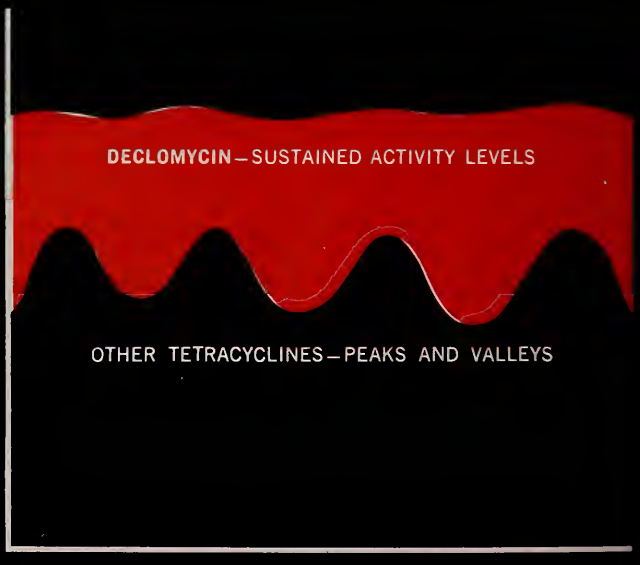
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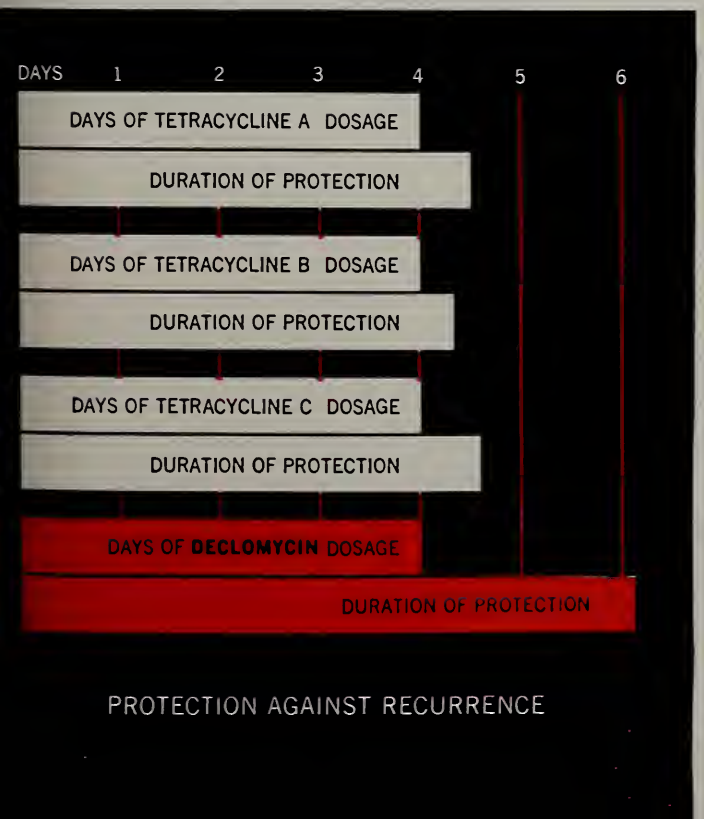
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PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. **Dosage:** 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into 4 doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored), bottles of 2 and 16 fl. oz. **Dosage:** 3 to 6 mg. per pound body weight per day—divided into 4 doses.

PRECAUTIONS—As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics. The patient should be kept under constant observation.

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tion was in conflict with the official expression of a majority of the state conferences on aging.

In summary, Doctor Baker said, " . . . this particular section meeting was an exercise in mass thought control, with many delegates being manipulated into making predetermined decisions."

The Kennedy Bill

The action of the Income Maintenance Section is expected to be exploited by the new administration in its drive for social security health legislation, notwithstanding the results of the state conferences or the minority report.

Reports of the proposed "Kennedy Bill" indicate that it will be limited to hospital and nursing home care, with physicians' services covered only where the doctor works for the hospital.

It will probably call for coverage of some 14 million persons including 2½ million persons under age 65 who are children of OASDI beneficiaries.

Other Actions

While the social security health bill was being argued in the nation's press, many other recommendations were quietly being approved. Some of the major ones are outlined below:

• OASDI ought to be extended to all persons who work (MD's are presently the sole occupational group excluded), and the annual income taxable under OASDI should be increased above the present $4,800 level.

• To augment recommendations for increased job opportunities and relaxation of retirement practices, the conference also asked that OASDI cash benefits be liberalized and permissable outside income increased.

• Federal-state public assistance programs should be encouraged to provide more, and the eligibility age for women should be reduced to age 62, as it is under social security.

• A plea was issued to Congress to adopt fiscal policies which would curb inflation; but, at the same time, the government, private insurance companies and management were asked to keep pace through expanded retirement benefits.

• To help the elderly help themselves, it was recommended that vocational guidance, rehabilitation and adult education be used to help the aged carve a niche in the labor market. Anti-age discrimination legislation was recommended for the state level of government, and a Committee on Employment of Older Workers was requested at the Federal level.

• Regarding housing, it was agreed that the problem should be attacked first by the individual, then by private enterprise, then by community, state and federal governments. The immediate Federal role called for expansion of mortgage insurance and long-term loans, a broad research program, and expansion of public housing. Special housing and environmental needs were discussed, and the importance of integration into the community, and into future community planning, was stressed.

• It was recommended that adequate inpatient and outpatient rehabilitation facilities be developed in hospitals; that Federal grants be made available to states for demonstration and training projects; and, that the feasibility of a National Institute of Rehabilitation be studied.

• Taking exception to the section on Income Maintenance, the section on Health and Medical Care opposed social security health legislation, preferring widespread implementation of the Kerr-Mills Bill, which provides a Federal-state matching funds program for public assistance recipients and the "near-needy." Other recommendations: More home care, as a community responsibility; tax dollars should be used to finance health programs only when all other resources fail; educational programs on health maintenance should be inspired and directed by health professions; mental health services and facilities should be expanded at the community level and integrated into other health care programs; better coordination of services is necessary; and, continuing community appraisal is needed.

• Recognizing that problems can best be resolved at the community level, it was recommended that Committees on Aging be formulated in every community, and charged with the responsibility of fully utilizing existing resources, and generally engaging in

community planning to coordinate and encourage the extension of services to meet the needs of the elderly. The committees would also serve in liaison capacity with state and Federal aging groups.

• At the state level, it was recommended that a permanent unit (office, commission, or agency) on aging be established, to provide statewide leadership in programs for the aging, and in public awareness of the problems; that the unit would provide a mechanism by which governmental and non-governmental agencies can coordinate programs for the aging; that the unit be established by legislative action, but independent of other state agencies; and that there be a broadly representative advisory group.

Oklahoma's Plans

It is anticipated that a conference will be held in Oklahoma this Spring to discuss application of the conference recommendations to the problems of Oklahoma.

The state White House Conference was held last June in Norman, at which time it was agreed that it would reconvene after the national meeting and get to work on upgrading the health and welfare status of Oklahoma's elderly.

At the present time, it appears that Oklahomans are leaning toward the creation of an Institute of Gerontology, rather than a political unit on aging as recommended in Washington. The "Institute" would be a part of OU's Extension Division, affiliated with the Family Life Institute, and its activities integrated with all state universities and colleges.

Whatever else may be done as a result of the state and national conferences, one thing is sure—there has been an awakened interest in "aging" in Oklahoma. Items: Pryor's Council has set aside $2,000 for building a center for older persons; Lawton has launched a National Heart Institute survey to develop criteria for evaluating a community's heart disease problems and resources; Durant has tied in with the Lawton project, setting up a control test on the study.

Kennedy Gets OASDI Proposal

On January 10th, a special task force urged President Kennedy to adopt a program of health care for the aged financed by higher Social Security taxes.

The report, presented by task force chairman Wilbur Cohen, also recommended increased Federal spending for medical education, research, hospital and nursing home construction to the tune of some $250 *million* annually.

Care for Aged

The medical care for the aged proposal would cover at least 14.5 million OASDI beneficiaries and dependents. Initially, Social Security taxes would be raised one-half per cent, bringing in $1 billion per year; ten years later, taxes would be raised another three tenths of a per cent, yielding $2 billion.

For these tax monies, beneficiaries would receive in-patient hospital services, out-patient diagnostic services, skilled home nursing care and health services in the home, such as visiting nurses.

Details on the plan were sketchy, but it would apparently offer 120 to 180 days of in-patient care annually. Hospital benefits would begin one year after the tax was imposed, other benefits in two years.

In an attempt to avoid AMA opposition, doctor's fees were excluded.

Although Kennedy is not bound by the task force findings, his personal sentiments and those of the Democratic Party have previously endorsed a Social Security approach to the health care problem. In August of last year, Kennedy co-sponsored similar legislation which was narrowly defeated in the Senate.

Soaring Taxes

Social Security taxes are already scheduled to reach 9% of income by 1969. A worker with a wife and two children and $3,150 annual income now pays more Social Security tax than Federal income tax.

Kerr-Mills Preferred

Organized medicine is opposing any Social Security legislation on the grounds that the Kerr-Mills Bill should be given time for implementation.

This program, passed August, 1960, provides Federal-state matching funds for health care programs.

Lawyers-Doctors Hold Annual Banquet in Cushing

Members of the legal and medical professions of Payne and Pawnee counties held their annual interprofessional banquet at the Cushing Hotel on February 2nd. More than fifty attended the traditional event, which was sponsored this year by the medics.

Representing the OSMA were Walter E. Brown, M.D., President, Clinton Gallaher, M.D., President-Elect, and staff members Dick Graham and Don Blair. Clifford Bassett, M.D., Cushing, was in charge of arrangements and presided at the dinner.

Forensic Medicine

Following the social hour and dinner, the principal speaker of the evening, William E. Jaques, M.D., Chairman of the Department of Pathology at the O.U. Medical Center, presented an interesting talk entitled "Facts and Fancies of Forensic Medicine."

Doctor Jaques traced the development of the coroner and medical examiner systems from ancient times to the present day. He pointed out that the original "coroners" were employed by kings to investigate deaths for the primary purpose of appropriating property for the crown.

The first "medical examiners" were Roman physicians designated to care for the indigent, but they later became involved in inspecting deaths which occurred under mysterious or unknown circumstances. The medical examiner system finally found its way to the United States, first being employed by the state of Massachusetts in 1877.

Oklahoma Laws

The pathologist appraised Oklahoma laws, pointing out existing inadequacies which retarded good law enforcement. He said an autopsy, in the case of an unexplained death, may only be ordered by the next of kin or a Coroner's Inquest Jury. The Coroner's Inquest Jury, consisting of a Justice of the Peace and six persons of his choosing, may pass judgment on the cause of death, ordering an autopsy if they suspect foul play.

Doctor Jaques illustrated to the group the technicalities of determining cause of death and expressed doubt that the Coroner's Jury was qualified for the responsibility.

He briefly mentioned Senate Bill 81 which is now being considered by the Oklahoma State Legislature. The bill establishes a state medical examiner system.

Interest Accelerated in Geriatrics

In the wake of increased national concern over an aging population, more and more physicians are turning their interests toward the field of geriatrics. Last year, 2,000 physicians were added to the rolls of the American Geriatrics Society, bringing the total membership to 7,500. Just ten years ago, the group had only 400 members.

Most geriatricians are general practitioners or internists who simply devote their practices to the ailments of the elderly. The AGS does not "certify" as specialty societies do, because aging cannot be so narrowly defined.

Liberals Win 'Rules' Battle

Speaker of the House Sam Rayburn's plan to enlarge the House Rules Committee from twelve to fifteen members passed with a hair-breadth majority on January 31st. The vote was 217 to 212 in favor of adding three liberal representatives to the group, thus breaking a Republican-Conservative Democrat coalition which has successfully blocked many high-spending legislative proposals in the past.

The maneuver was primarily a power struggle between Rayburn and Committee Chairman Howard Smith, but the liberalization of the group will pave the way for some of President Kennedy's spending programs. Kennedy may also use the vote to keep some House Democrats in line. Those who voted for expansion will receive patronage; those against, short shrift.

The House Rules Committee has the responsibility for sifting thousands of legislative proposals, determining which will be brought to the floor for a vote, as well as how much time will be allowed for debate. Although its authority may be circumvented by several techniques, it can ordinarily "pigeon hole" controversial bills. The question now is which bills will be boosted by the Committee and which retarded.

The ? cost of Medical Care...

In a quandary trying to explain medical care costs in the light of today's over-all rising prices? If so, you'll be interested in these pages from the American Medical Association's new booklet "The ? Cost of Medical Care." This 16-page cartoon pamphlet is being distributed through your state medical society.

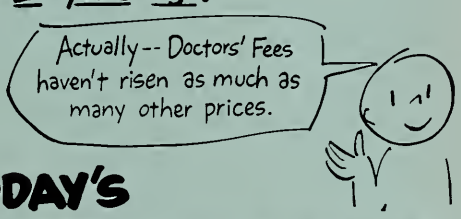


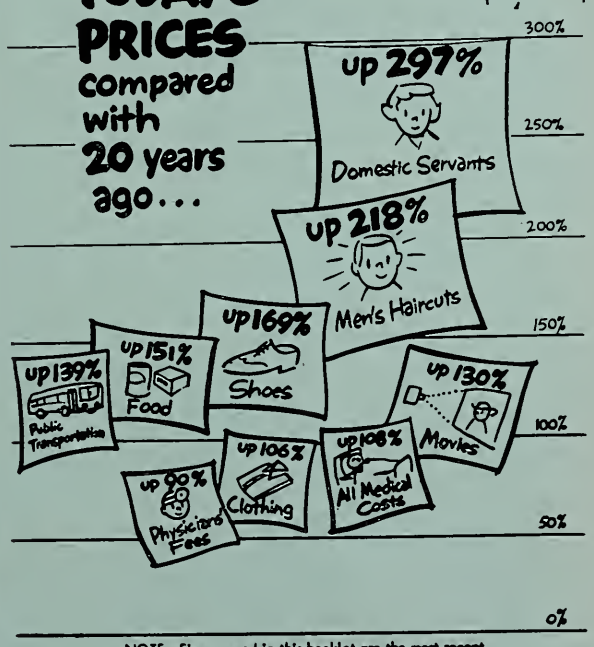
I know my health is a priceless asset.
If I'm sick, I want the best care there is.
But is medical care taking
a bigger bite out of my dollar?
That's what I'd like to FIND OUT.....



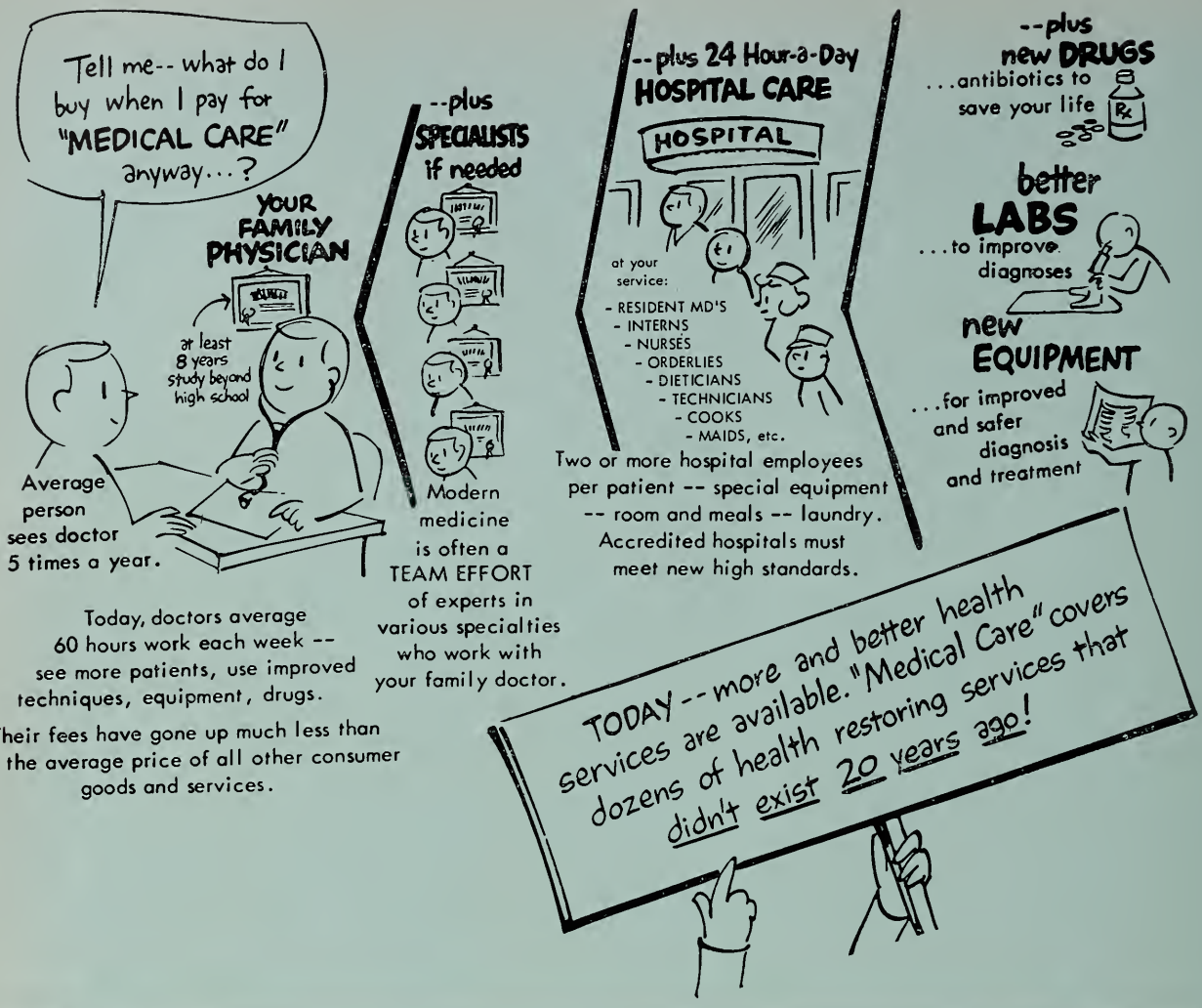


...in terms of INFLATED DOLLARS--
yes, like everything else... but
let's compare the PERCENTAGE
of increase in the prices of
some things **today** with
20 years ago!

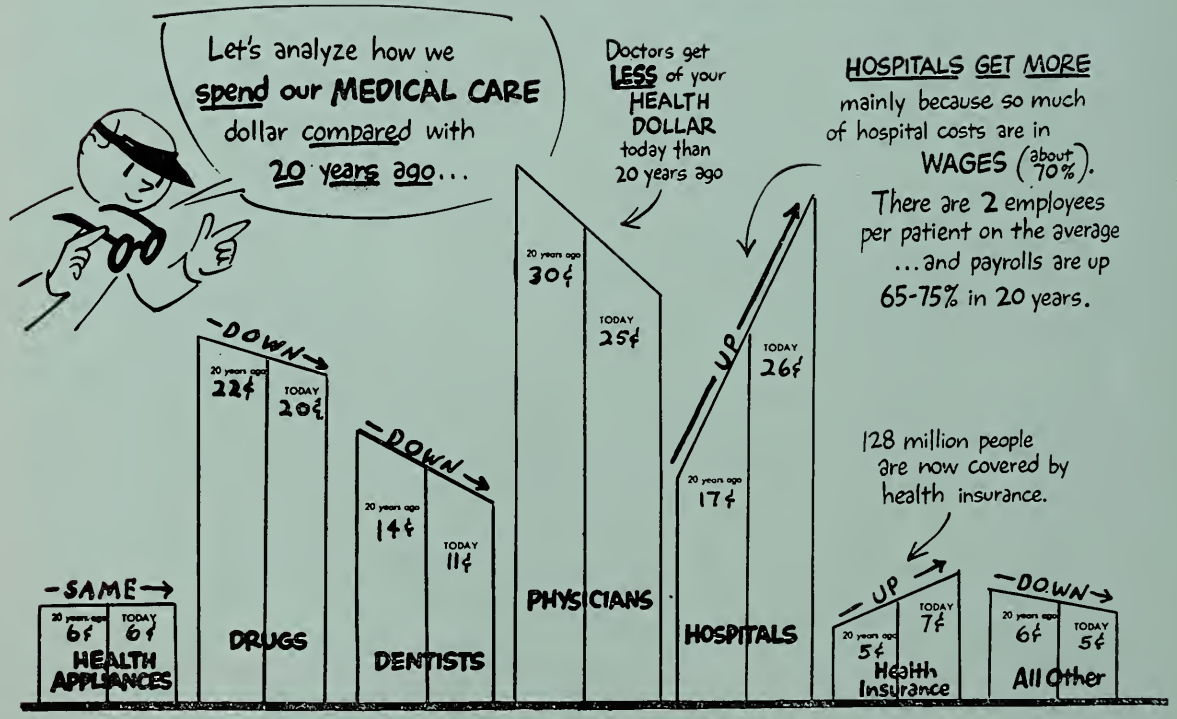




NOTE: Figures used in this booklet are the most recent available..."today" is 1959 and "20 years ago" is 1939.



EACH DOLLAR SPENT FOR MEDICAL CARE



Meanwhile--in the last 20 years--

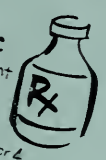
MEDICAL SCIENCE

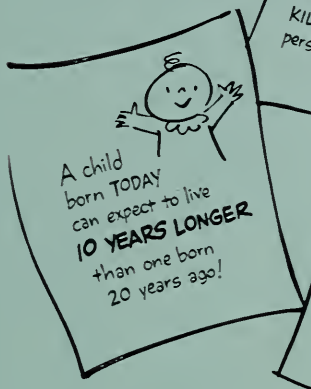
has been making

SPECTACULAR PROGRESS--



Today--New **ANTIBIOTIC DRUGS** prevent PNEUMONIA that used to KILL 1 in every 3 or 4 persons it attacked.





A child born TODAY can expect to live **10 YEARS LONGER** than one born 20 years ago!



TODAY--Regular and Complete **PHYSICAL EXAMS** and early treatment keep thousands well who would have DIED just a few years ago.



TODAY--Danger of **INFECTION** through Surgery has been GREATLY REDUCED.



TODAY--Low Cost **VACCINES** can protect you against much serious illness.



Today--Average stay in a HOSPITAL for an **APPENDECTOMY** is 4 days--- 20 years ago it would have been at least 14 days.



Today--thousands leave hospitals WELL who would have DIED 20 years ago.



How can the average person **AFFORD** today's Medical Super-Care?

ANSWER: INSURANCE--72% of the total population and 49% of those over 65 today have....



...which helps you pay your expenses for those UNFORESEEN HEALTH PROBLEMS.

Because people can't choose when they'll be sick, or how long--INSURANCE is the logical answer.

4 types of Voluntary Health Insurance



BLUE SHIELD

...pays your doctor for medical and surgical services. Gives you free choice of doctor.



BLUE CROSS

...pays hospital bills for board, room and special hospital services. Gives you free choice of hospital.



INSURANCE COMPANY CONTRACTS

...usually pay you cash towards hospital, surgical and medical bills or services. Do not restrict choice of physician or hospital.



GROUP PRACTICE PLANS

...and consumer sponsored plans -- provide specified types of benefits for care rendered by physicians working in groups.

TODAY voluntary health insurance pays $5.2 billion of the health care bills of insured people. Voluntary health insurance is "good medicine!" -- it prevents worry -- helps you meet cost of illness.

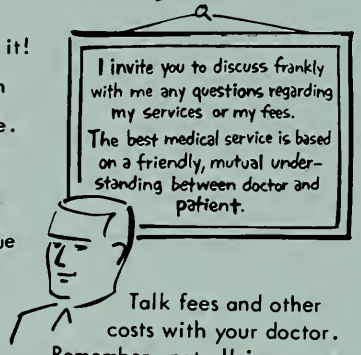
Also--as a result of medical science... TODAY--the length of time a person is ill or hospitalized is much less than 20 years ago--hence the cost of being sick or absent from work is often less--an important economic factor.

FAMILIES WITH MEDICAL EXPENSE (per year)	HOW MUCH	HOW MANY
	LESS THAN $200	68%
	$200 to $500	21%
	$500 or over	11%

How to get the **MOST** from your **Health Dollar...**

(a) Choose your **PHYSICIAN** WISELY!

The right to choose your own doctor is a precious privilege. Use it! Choose a physician in whom you have confidence. He will give you personalized health service and help you get more value for your health dollar.





Talk fees and other costs with your doctor. Remember, not all insurance contracts are designed to pay doctor's total fee, nor intended to cover total medical and hospital charges. If you cannot pay in full, tell the doctor and he may be able to work out a plan for deferred or adjusted payments.

(b) Choose your **HEALTH INSURANCE** WISELY!

Can you choose and change doctors?

Can you choose and change hospitals?

Does it cover you anywhere?

Will it admit you to most hospitals?

Does it cover most common major illnesses?

Does it cover outpatient surgery, diagnostic and laboratory services, nursing home care, etc.?

Is it enough for big medical and hospital expenses?

Any "legal loop-holes" in contract?

Is company financially stable?



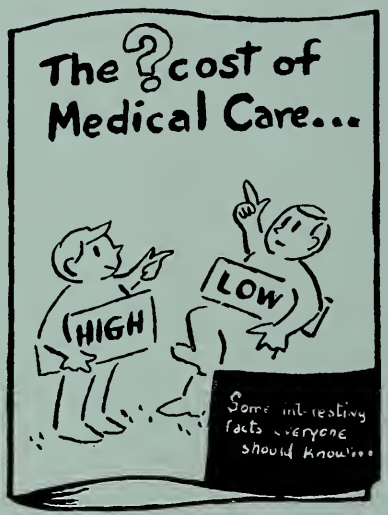
DON'T ABUSE your HEALTH INSURANCE. Use it only when you need it. Don't feel cheated if you're not ill.

Sooooo...

Our health care dollar **buys more and better health care services** than ever before--

Today, doctors' fees have gone up -- but far less than many other family expenses in the last 20 years. And we're paying about the same share of our paycheck for "health care" as we did 20 years ago. We also have health insurance to protect us.

Best of all...advances in medical science help us live longer. Yes... our medical dollar is wisely invested in longer and healthier lives!



...a new public service publication for state and county medical societies from AMA.

Thirty-Eight Attend Ponca City Postgraduate Meeting

OSMA's first Regional Postgraduate Course of 1961, held in Ponca City on January 24th, was well received by northern Oklahoma physicians. Thirty-eight physicians from the surrounding counties attended the afternoon and evening affair for a refresher course on "The Kidney."

Conducting the course, which was jointly sponsored by the O.U. School of Medicine, were Doctors W. O. Smith, John P. Colmore and Robert Lindeman, all of the school.

Beginning at 4:00 p.m. at the Ponca City Country Club, the program featured basic science, diagnostic and therapeutic considerations of the kidney. The presentations were designed to appeal to both specialists and generalists.

After two hours of instruction, a dinner was held, followed by one hour of instruction and one hour of discussion. The course was approved for four hours of Category I credit by the AAGP.

Endorsed by Delegates

The Ponca City meeting marked the beginning of a series of the regional courses over the state, as authorized by the OSMA House of Delegates last spring.

It was agreed by the Delegates that each course would cover a particular organ-system, and, furthermore, that dinner meetings should be held where possible, in order to conserve the registrants' time.

Participants Listed

Attending the Ponca City event were: Jack O. Alexander, M.D., Ponca City; Elvin M. Amen, M.D., Bartlesville; E. A. Brashear, M.D., Barnsdall; M. D. Carter, M.D., Okeene; R. W. Daugherty, M.D., Pawhuska; John F. DeJarnette, M.D., Ponca City; A. M. Evans, M.D., Perry; William H. Garnier, M.D., Stillwater; George B. Gathers, M.D., Stillwater; W. A. Geiger, M.D., Fairfax; R. C. Gentry, M.D., Bartlesville; John B. Gilbert, M.D., Ponca City; T. C. Glasscock, M.D., Ponca City; R. R. Hannas, M.D., Sentinel; Richard F. Harper, M.D., Pawhuska; Wilma Jeanne Johnson, M.D., Stillwater; Harold H. Jones, M.D., Ponca City; James R. Kay, M.D., Fairview; P. A. MacKercher, M.D., Ponca City; Louis A. Martin, M.D., Sapulpa; W. G. Mays, M.D., Fairfax; V. C. Merrifield, M.D., Ponca City; E. C. Mohler, M.D., Ponca City; R. H. Moorman, M.D., Blackwell; Robert F. Morgan, M.D., Blackwell; D. G. Morton, M.D., Cleveland; J. Murphree, M.D., Ponca City; P. T. Powell, M.D., Ponca City; Cody Ray, M.D., Pawhuska; Clarence R. Roberts, II, M.D., Enid; M. L. Saddoris, M.D., Cleveland; H. R. Schmidt, M.D., Newton, Kansas; Abbott C. Scott, M.D., Stillwater; W. G. Sheldon, M.D., Blackwell; J. T. Terry, M.D., Ponca City; Wirt A. Warren, M.D., Wichita, Kansas; James A. Webb, M.D., Ponca City; and S. Victor Yeakel, M.D., Stillwater.

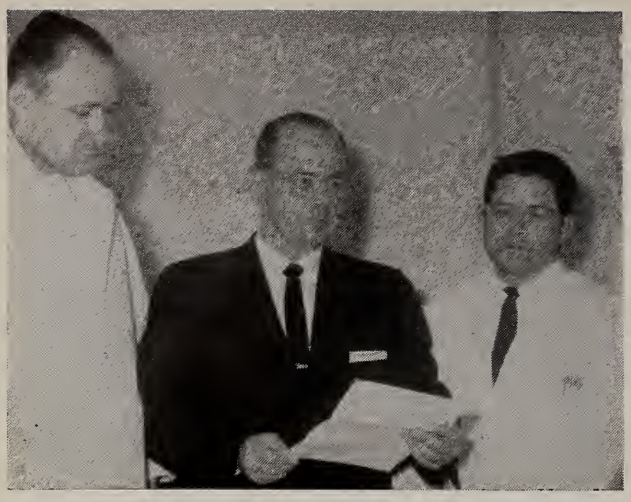
The meeting was planned by the OSMA Committee on Postgraduate Education and its Chairman R. R. Hannas, M.D. Committee member V. C. Merrifield, M.D., Ponca City, was in charge of local arrangements.

Next P.G. Meeting Slated for Lawton

The second regional Postgraduate Course of the year will be presented at Lawton, Tuesday, February 28, 1961, and like its predecessor at Ponca City, will be a dinner meeting beginning at 4 p.m. It will be held at the Lawton Westside Country Club, with L. M. White, M.D., in charge of local arrangements.

The subject will be "The Lung" and a team of instructors from the University of Oklahoma School of Medicine will present topics covering basic physiology, recent research advances and practical aspects of diagnosis and treatment. The course has been approved for four hours Category I credit by the AAGP.

Price will be $7.50 which includes the dinner and tuition. All doctors in the state are welcome, and those in Southwestern Oklahoma are particularly invited to attend. Reservations should be made with the State Medical Association office on forms to be provided by a direct-mail invitation.



Wyeth Grants $5,000 For Pediatric Research

Unrestricted $5,000 grant for pediatric research is presented Doctor Harris D. Riley, Jr., right, chairman of the Department of Pediatrics, University of Oklahoma Medical Center, by H. A. Dicken, Wyeth Laboratories district manager. At left is Doctor Doman K. Keele, assistant professor of pediatrics on whose studies (human growth hormone investigations) the award was based. The Wyeth grant is one of 20 made annually to further research in medical schools and hospitals.

California Studies Social Security Position

Polls of physicians in seven of California's largest counties reveal that five of the counties oppose—by narrow margins—the inclusion of M.D.s in the social security program.

In the San Francisco and Los Angeles areas, the vote was particularly close. A vote of 505 to 468 in favor of inclusion was recorded in San Francisco, while Los Angeles rejected the idea by a vote of 1,993 against to 1,922 for.

Alameda County voted in favor of social security, 426 to 341.

Four smaller counties reported a "no" vote. San Diego, 204 yes, 291 no; San Joaquin, 70 yes, 79 no; Orange, 119 yes, 252 no; Ventura, 45 yes, 89 no.

The poll was taken on a ballot, designed by the California Medical Association, which included background information and pro and con arguments.

Dentists Dodge Dentifrice Dilemma

The American Dental Association has written letters to wholesalers and retailers across the country, pointing out that it never "endorsed" nor "approved" Proctor and Gamble's Crest toothpaste.

The ADA is apparently upset over dealer promotions of the dentifrice which either make direct statements or implications of association endorsement.

Its effort to curb such Crest promotions, the ADA says, is meant to clarify the organization's original position, not to change it.

In its August 1 Journal, the association reported: "None of the other dentifrices evaluated to date is supported by evidence considered adequate to demonstrate substantial effectiveness." P and G was authorized to make the following advertising statement: "Crest has been shown to be an effective anticaries dentifrice that can be of significant value when used in a conscientiously applied program of oral hygiene and regular professional care; Crest dentifrice may also be of value as a supplement to public health procedures."

The ADA fuss is not with Procter and Gamble, since all company promotions are cleared by the dental group. Middlemen, however, argue that an endorsement *was* proffered. P and G competitors are naturally upset about the whole affair.

ATTENTION!

County Society Officers

Resolutions for the Annual Meeting of the House of Delegates, May 7th, are due at the OSMA Headquarters by April 1st. They must be in by this date to allow adequate time for processing.



Three Oklahoma County Physicians Honored

Honorary-Life Membership Plaques and one Fifty-Year Pin were awarded to three Oklahoma County physicians in recognition of their years of service to the medical profession at the December meeting of the Oklahoma County Medical Society. Pictured above, left to right, are: C. O. Epley, M.D., Oklahoma City practicing physician who received both a plaque and the Fifty-Year Pin; R. Q. Goodwin, M.D., Past-President of the Oklahoma State Medical Association, who made the presentations; Charles N. Berry, M.D., who is now retired after forty-four years of practice; and Hull W. Butler, M.D., who retired after thirty-eight years of practice.

CBS THROWS CURVE TO AMA

There was no question in anyone's mind that American medicine took a violent beating at the hands of CBS television on February 2nd. The program was an unfair, biased documentary entitled "The Business of Health: Medicine, Money and Politics (CBS Reports).

At the conclusion of the program, CBS thanked the American Medical Association "for its cooperation."

Leo Brown, AMA public relations chief was quick to reply that the "cooperation" had been a one way affair.

"Thousands of feet of film were shot since last May, only 4½ minutes of which were used, and that was mostly taken out of context," Brown said. "The AMA was not consulted at any time during the preparation of the script, nor were staff members permitted to review the film prior to its presentation."

According to Brown, CBS Reports producers requested permission to "cover" on a news basis the AMA's National Congress on Prepaid Health Insurance last May. Permission was granted and a film crew spent two days at the meeting. Three months later, at the request of CBS a filmed interview with Doctor Leonard W. Larson was arranged. For five hours he answered questions, primarily regarding his experiences as chairman of the Commission on Medical Care Plans. Then, three weeks before the program, a speech of Doctor E. Vincent Askey's was filmed.

The final product of CBS editing was a bundle of mis-information, slanted to portray the profession in the worst possible light. In view of the improper handling of this program by CBS, those who witnessed the attack on medicine are encouraged to register protests with the network president. He is Frank Stanton, President, CBS, 485 Madison Avenue, New York 20, N.Y.



Oklahoma City Psychiatric Clinic Opened

Contemporary in design, the recently completed Oklahoma City Psychiatric Clinic, located at 912 N.W. 57th, was designed specifically for the practice of psychotherapy. Among the first of such buildings designed exclusively for this purpose, the twelve-inch walls and acoustically-lined air ducts to each room, help to create the desired privacy necessary for this form of psychiatric treatment.

Decor in the six offices has been done according to the individual tastes of the physicians who occupy them. A multiple purpose room will be used for staff conferences, group therapy sessions, and various educational activities, as well as for a library.

The staff, and owners, include five psychiatrists: Doctors Marcus S. Barker, Dale W. Peters, Harry G. Hightower, Stanley M. Kemler and John Barry Massey. The Reverend Mack Powell joined the clinic to work specifically with marital counseling and the establishment of the Pastoral Institute, an activity designed to create a closer relationship between psychiatry and religion.

AMA Warns Against Health Machine Quacks

Through its magazine for the laity, "Today's Health," the American Medical Association has warned the public against hucksters of quack health machines.

An article in the magazine said health machine quacks rake off a large share of the $610 million paid to medical charlatans annually, many times luring the people away from legitimate treatment of serious diseases.

The article reports that the Food and Drug Administration wages a continuous battle against such charlatans, but its enforcement powers are limited. The laws provide only a year in jail and $1,000 fine for initial offenders in machine quackery, hardly enough to deter such a lucrative business.

Part of the AMA's public service program, the medical organization's Bureau of Investigation works hand in hand with the FDA in efforts to educate the public and strengthen enforcement laws.

Non-Profit Hospitals Are Liable in Michigan

A far-reaching precedent was recently set by the Supreme Court of Michigan when it ruled that charitable hospitals are not immune from damage suits.

The case which brought about the ruling involved the death of a woman who received a transfusion of incompatible blood.

The court, in its majority opinion, bluntly denounced the long-standing immunity rule, alleging that it was originally granted when "charity typically operated on a small scale."

In drawing a contrast between old and new concepts of charity, the court concluded that "the principles of law, logic and intrinsic justice demand that the mantle of immunity be withdrawn."

Almost coincidentally with the Michigan case came the verdict of a California District Court of Appeal holding that a public hospital cannot be sued for medical negligence.

Membership Roster To Be Out in March

The Oklahoma State Medical Association's 1961 Directory will be off the press in March and mailed to each association member.

Included in the directory will be two breakdowns of the membership. The first will be a straight alphabetical listing of name, address, date of birth, school and year of graduation, and specialty or special interest. The second roster will simply be a breakdown by county.

In addition, the full text of the association's Constitution and By-Laws will be printed, along with handy reference information on various local and national medical and medically-related organizations.

The directory will also include a roster of association officers and councilors.

Are You Listed Correctly?

To expedite publication, individual questionnaires will not be sent to physicians this year. The book will be compiled from association records and the information double checked by county society secretaries in some instances.

To Correct Your Listing
See Ad, Inside Front Cover

Any physicians incorrectly listed in the 1960 Directory are urged to contact the OSMA Executive Office immediately. Also, any recent changes in address or specialty listing should be reported.

Each member of the association will receive one complimentary copy of the publication. Additional copies will be available in limited quantities at one dollar each.

Nuclear Medicine Group To Meet in Oklahoma City

The Southwest Chapter of the Society of Nuclear Medicine will hold its 6th Annual Meeting on April 8th and 9th at the Ramada Inn, Oklahoma City.

Peter E. Russo, M.D., Oklahoma City, is Program Chairman for the event and Mr. Winfield Evans of St. Anthony Hospital's Isotope Department is in charge of arrangements. William H. Reiff, M.D., Oklahoma City, is Publicity Chairman.

Coming Meetings

1961

FEBRUARY

AMERICAN COLLEGE OF PHYSICIANS, Selected Topics in Internal Medicine, Feb. 20-24, University of Oklahoma School of Medicine, Okla. City. Write to The American College of Physicians, 4200 Pine St., Philadelphia 4, Pa.

CENTRAL SURGICAL ASSOCIATION, Park Plaza Hotel, St. Louis, Feb. 16-18. Angus D. McLachlin, Victoria Hospital, London, Ontario, Canada, Secretary.

MARCH

AMERICAN COLLEGE OF ALLERGISTS, Graduate Instructional Course and Seventeenth Annual Congress. March 12-17. Statler Hilton, Dallas, Texas. Write John D. Gillaspie, M.D., Treasurer, 2141 14th Street, Boulder, Colorado.

AMERICAN COLLEGE OF SURGEONS, SECTIONAL MEETINGS FOR SURGEONS AND GRADUATE NURSES, Hotels Bellevue-Stratford, Ben Franklin, and Sylvania, Philadelphia, March 6-9. William E. Adams, M.D., 40 E. Erie St., Chicago 11, Secretary.

AMERICAN SURGICAL ASSOCIATION, Boca Raton Hotel, Boca Raton, Fla., Mar. 20-24. W. A. Altemeier, M.D., Cincinnati General Hosp., Cincinnati 29, Ohio, Secretary.

MISSOURI STATE MEDICAL ASSOCIATION, Hotel Muehlebach, Kansas City, Mar. 18-21. John I. Matthews, M.D., 302 Bolivar, Jefferson City, Mo., Secretary.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY. March 6-9. The Roosevelt Hotel, New Orleans, Louisiana. Write Mannie D. Paine, Jr., M.D., Secretary, The New Orleans Graduate Medical Assembly, 1430 Tulane Ave., New Orleans 12, La.

THE SCOTT AND WHITE CLINIC, Ninth Annual Postgraduate Conference, Medicine and Surgery, Temple, Texas, March 5, 6, 7, 1961. Write Mrs. Judy Ingram, Scott and White Clinic, Temple, Texas.

UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE SHORT COURSE, Urology-Symposium and C. B. Taylor Lectureship. March 8. Medical School auditorium. Write Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th, Okla. City, Okla.

APRIL

AMERICAN ACADEMY OF GENERAL PRACTICE, Miami Beach, Fla., Apr. 13-20. Mr. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Mo., Executive Director.

AMERICAN ACADEMY OF NEUROLOGY (members and guests), Sheraton-Cadillac Hotel, Detroit, Apr. 27-29. Mrs. J. C. McKinley, 4307 E. 50th St., Minneapolis 17, Executive Secretary.

(Continued on Page xxix)

Letter to the Editor

Ben H. Nicholson, M.D.
301 N.W. 12th
Oklahoma City, Oklahoma

Dear Doctor Nicholson:

In July of 1960 several conferences were held with Mr. Voyle Scurlock, Director of Vocational Rehabilitation Division of the State Board of Vocational Rehabilitation; Mr. Lowell Green, Liaison Representative from VR; Mr. Seth Wilson, Legislative Consultant for VR; Judge Harley E. Venters, Presiding Judge of the State Industrial Court of Oklahoma; and, Miss Gloria M. Quaid, Liaison Representative from the Industrial Court, in an attempt to work out a feasible program of cooperation between the two agencies for the purpose of screening all cases of total permanent and partial permanent disability, including those needing only counseling and guidance, for referral to VR. Perhaps this letter, outlining our action, will be of interest to your readers.

At the present time, referrals are made from Temporary-Total Orders; Permanent-Partial Orders; Orders on Joint Petitions; Medical Orders and the Employee's First Notice of Injury, referred to as a "Form 3."

Incomplete medical information on the Form 3's results in referrals to VR that are not in need of the training program. Consequently, a form letter to be forwarded to the attending physician or physicians designated on the Form 3, asking for an estimation of whether or not the patient will be able to return to his former occupation upon reaching maximum healing; an estimation of the date of release for return to work; and additional remarks has been composed and is now in use by the Court. Cooperation of the treating physician in response to the form letter will materially assist the Court in this rehabilitation program.

Many states have already adopted a program similar to Oklahoma's, while some are still in the process of working out an effective program but all states feel the need for such a program. The Florida Legislature has set up a Rehabilitation Division in their Court as well as passing legislation enabling them to enforce the training program.

An effective program of referral and rehabilitation training can reduce the welfare rolls, lower compensation insurance rates and improve the adjustment of physically handicapped individuals, enabling them to resume their place in the economic structure of our society.

Sincerely yours,
Harley E. Venters, Presiding Judge
State Industrial Court

Have You Heard?

KIRK T. MOSLEY, M.D., Oklahoma Commissioner of Health has announced appointment of the following County Superintendents of Health: CLYDE M. BLOSS, M.D., Holdenville, for Hughes County; JOAN K. HIETT, M.D., Altus, for Jackson County; and JERRY E. KING, M.D., Stigler, Haskell County.

MALCOM E. PHELPS, M.D., El Reno, is one of nine physicians selected by the Federal Aviation Agency to serve on a medical advisory panel which will consider petitions from airmen seeking exemptions from FAA medical standards.

First place in the scientific exhibits at the Southern Medical Association meeting in St. Louis was awarded to the exhibit, "Management of Gynecologic-Urologic Complications," shown by JOSEPH W. KELSO, M.D., and JOSEPH W. FUNNELL, M.D. of Oklahoma City.

DAVID OWREY, M.D., has established his practice in Lawton following the completion of a four-year surgical residency in Texas.

WILLIAM N. WEAVER, M.D., Muskogee, has been named to the state board of health. He succeeds the late Charles Ed White, M.D., Muskogee.

Deaths

W. Albert Cook, M.D.
1875-1960

W. Albert Cook, M.D., organizer and first President of the Tulsa County Medical Society, died December 30, 1960 in Sand Springs.

A native of Charles City, Iowa, he graduated from Rush Medical College in 1897. After postgraduate work in Chicago, New York City and Vienna, Austria, he came to Tulsa in 1901.

Doctor Cook served as a Delegate to the American Medical Association for twenty-one years. In addition to his interest in medical affairs, he was active in civic work, having served as water commissioner of Tulsa at one time.

Twice honored by the Oklahoma State Medical Association for his service to the profession, he was presented a Fifty-Year Pin in 1948 and in 1949, he was made an Honorary member.

Among the organizations in which Doctor Cook held memberships was the American College of Surgeons and the American Academy of Ophthalmology and Otolaryngology.

Raymond G. Sherwood, M.D.
1886-1960

Raymond G. Sherwood, M.D., Tulsa obstetrician since 1919, died on December 4, 1960.

A native of Minden, Minnesota, Doctor Sherwood graduated from the University of Nebraska School of Medicine in 1917. After serving as a captain in the Medical Corps during World War I, he established his practice in Tulsa.

Doctor Sherwood was active in Boy Scout and Optimist Club activities, serving as an adult Boy Scout Council member and at one time was district governor of Optimist International.

John E. Heatley, M.D.
1887-1961

John E. Heatley, M.D., 74-year-old, longtime University of Oklahoma School of Medicine profesor, died January 20, 1961 in Oklahoma City.

A native of Hiawatha, Kansas, Doctor Heatley graduated from the University Medical College of Kansas City in 1911. After first establishing his practice in Morrill, Kansas in 1914, he came to Oklahoma City in 1916.

Doctor Heatley was a Professor of Radiology from 1919 to 1948 and was then named professor emeritus.

In 1953, he was honored for his outstanding contribution to the medical profession when the Oklahoma State Medical Association made him an Honorary Member. In addition, he was a Life Fellow of the American College of Physicians and a member of the American College of Radiology.

Claude S. Chambers, M.D.
1890-1961

Claude S. Chambers, M.D., longtime Seminole physician and member of the State Board of Regents for Higher Education, died in Oklahoma City January 6, 1961.

Born in 1890, Doctor Chambers graduated from the University of Tennessee College of Medicine in 1913. After practicing in Osage county, he established his practice in Seminole.

Doctor Chambers served on the University of Oklahoma Board of Regents from 1936 to 1945, the first medical doctor to serve on the board. Governor Johnston Murray appointed him to the other board in 1954, a term which he would have completed in 1963.

Active in many civic and community affairs, Doctor Chambers had served as president of both the Rotary Club and the Chamber of Commerce.

PHYSICIAN PLACEMENT

General Practice

Frank Augustus Bautz, M.D., 265 Concord Road, Sudbury, Massachusetts; age 46; married; Harvard Medical School, 1942; board eligible; eligible Summer 1961.

Floyd E. Webb, Jr., M.D., 2527 Webster Drive, Alexandria, Louisiana; age 27; married; University of Oklahoma, 1957; available August, 1961.

Kenneth T. Woodsides, M.D., 1923 19th Loop, Sandia Base, Albuquerque, New Mexico; age 27; married; Medical College of Alabama, 1957; available April, 1961.

E.E.N.T.

August L. Stemmer, M.D., 20th Station Hospital, APO 696, New York, N.Y.; age 32; married; Harvard Medical School, 1953; board certified; Available May 1, 1961.

Industrial

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available February, 1961.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

Sam A. Kinard, Jr., 3522 E. 17th Avenue, Denver 6, Colorado; age 29; married; Baylor University of Medicine, 1956; 2 years medical residency and 2 years cardiology residency; available July, 1961.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

Jack G. Smith, M.D., 812 North Third St., Bellaire, Texas; age 32; married; University of Texas School of Medicine, 1953; available January, 1961.

Thomas Turner Walton, Jr., M.D., 7375 Churchill, Detroit, Michigan: Age 29; married; Baylor College of Medicine, 1955; board eligible; veteran; desires group or associate practice; available July 1961.

George F. Winks, Jr., 217 S. Boulevard, Apt. 1, Richmond, Virginia; age 28; married; Medical College of Virginia, 1957; board eligible; available July 1, 1961.

Obstetrics and Gynecology

Philip Tabor Bennett, M.D., Quarters 739A, Maxwell A.F.B., Montgomery, Alabama; age 31; married: University of Texas Medical School, 1954; board eligible; available July 1961.

Walter G. Crowe, M.D., Mercy Hospital, Pride 4, Locust St., Pittsburgh, Pennsylvania; age 39; married; University of Tennessee College of Medicine, 1955; board eligible; available March 10, 1961.

Richard W. Fenaughty, M.D., 95 Hart Street. New Britain, Connecticut; age 31; married; State University of New York, 1957; available July 1961.

Milburn W. Hobson, M.D., 2011 West 39th, Kansas City, Kansas; age 30; married; Kansas University, 1955; available July 1, 1961.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

Orthopedics

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Preventive Medicine

Michael D. Buscemi, M.D., 1708 Flora Lane, Silver Spring, Maryland; age 49; married; Rush Medical College, 1937; board certified; available 30 to 60 days.

Radiology

Fred T. Hargrove, M.D., 217 North Pinewood Drive, Carthage, Texas; age 56; married; University of Oklahoma School of Medicine, 1934; board certified; available January 1, 1961.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty, broncho-esophagology and thoracic surgery; available immediately.

Richard Harrod Blank, M.D., 2603 Willard Drive, Charlottesville, Virginia; age 32; married; Cornell University, 1953; board eligible; available July 1, 1961.

James Steward O'Hare, M.D., 104 West Madison, Baltimore, Maryland; age 39; married; University of Maryland, 1946; board certified; available February, 1961.

Harry Houghton, M.D., 7223 W. Lakefield Dr., Milwaukee 19, Wisconsin; age 30; married; Western Reserve University, 1956; board eligible; available July 1, 1961.

John Mauver Kearney, M.D., 1036 Mt. Vernon Ave., Marion, Ohio; age 34; married, University of Pennsylvania, 1954; board eligible; available March 1, 1961.

David K. McAfee, M.D., 2560 McCurdy Way, Decatur, Georgia; age 32; married, Northwestern, 1953; board eligible; available July 1, 1961.

Auxiliary News

Last Lap

The push of the final quarter is upon us! February marks mid-winter board meeting, an opportunity for each county auxiliary to take final stock, re-cap, if necessary, and end in May a successful year.

Particularly important during the next few months will be our attention to medical legislation. The "Green Grow the Dollar Bills" theme will no doubt be played with greater fervor and enthusiasm from the opening day of Congress, increasing in vigor for at least ninety days. Your State Legislative Chairman will furnish you complete information as she receives it.

Dignified Health Care?

Each auxiliary member considers it her personal responsibility to be completely informed, to interest neighbors, friends, and women's groups in the best possible solution. Perhaps we have access to much useful information; however, in speaking to individuals and groups, we will often be asked questions which search further and deeper than health care for the aged and the Kerr-Mills Bill. *How to Win a War,* by Ed Lipscomb, is one of the finest investments in background reasoning you can have. Published by the Foundation for Economic Education, Inc., Irvington-on-Hudson, New York, it can be purchased for ten cents a copy, 100 copies for $7.00. Each member should read it and pass it to friends.

Mr. Kennedy commented on the statement submitted by the 16 gerontologists, "A Positive Response to the Challenge of Aging:" . . . They (the aged) should have an income adequate to permit them to continue their important contributions to American life and a program of medical insurance through the social security system for dignified health care . . ." When Mr. Kennedy appointed Mr. Ribicoff, he no doubt asked, "Aimez-vous Aime?" We know their views; we must act accordingly. Salience must be accompanied by knowledge and understanding; so we shall all be on our verbal toes.

Future Health Careerists

Future Nurses Day will be March 11, 1961. This event is annually held in order to stimulate interest in health careers. At this meeting high school students from over the state meet and have an opportunity to become better informed on new ideas, to compare programming and planning with other clubs, and to talk with representatives from various hospitals.

Many auxiliary projects and aims, community service, good public relations, etc., are understandably nebulous in practical evaluation. But here in our formation of, and continued interest in, health careers, we can see positive and immediate results. Our organization nationally of almost 2,000 Future Nurses Clubs has inspired the AMA to form a new permanent Department of Nursing, with a full-time staff. Formerly a Committee on Nursing handled this program.

As Leonard W. Larson, M.D., President-Elect of AMA, explains: This is "a formulation of a program which will coordinate the efforts of the nurse-physician team. It will interpret for physicians the changing role of the nurse as it relates to the medical care of the patient, and it will strive to bring together the two professions in all areas of misunderstanding which arise from the pressing demands to keep pace with modern medical advances. . . . It will cover all levels of nursing and serve in an advisory capacity on careers."

All committees and members who have participated whole-heartedly in the past to the success of this project, and those who are at present seriously working on its continuation, should be heartily congratulated for their worth-while service.

MISCELLANEOUS ADVERTISEMENTS

FOR SALE: G.E. 100-milliamper X-ray machine. Good condition. Contact John C. Wagner, M.D., Western State Hospital, Fort Supply, Oklahoma.

WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association. P.O. Box 9696, Oklahoma City, Oklahoma.

OKLAHOMA CITY office space available in Medical Center with dentist and pharmacy. 2312 N.W. 23rd St., across the street from new $12,000,000 shopping center on Shepard tract. Private entrance, 415 square feet floor space, off-the-street parking. Contact James R. Ricks, M.D., 2316 N.W. 23rd St., JA 5-7438.

FOR SALE: Two practically new matching Hamilton Examining Tables, two treatment cabinets, two stools, two lamps, walnut desk with matching swivel chair, and two side chairs. Contact Frank H. Cooper, M.D., 502 South Crawford, Norman, Oklahoma, phone JEfferson 4-5322 or JEfferson 4-6644.

WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

HOUSE PHYSICIANS NEEDED immediately for Tulsa's new St. Francis Hospital. Contact Key A, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma, for further information.

WANTED: Old and antique medical books in pediatrics and neurology. Contact Lucius Waites, M.D., Department of Pediatrics and Neurology, University of Oklahoma Medical Center, Oklahoma City.

FOR SALE: One Hamilton Examining Table (1960 model), 6 months old. Like new. Contact C. P. Taylor, M.D., 1201 East 5th, Ada, Oklahoma, FE 2-4424.

OPPORTUNITY for General physician in Cement, Oklahoma. One other World War I veteran doctor presently practicing there. Office vacancy in the center of town across from the drug store in farming and oil community with nearby hospitals at Anadarko, Chickasha, Lawton and Cyril. If interested, contact Wade H. Vann, M.D., Cement, Oklahoma.

25 YEARS AGO



Articles published in *The Journal* of the Oklahoma State Medical Association, February, 1936.

The Thymus Syndrome in the Newborn

Hugh C. Graham, M.D.

Tulsa

How frequent is the occurrence of thymus syndrome? The answer to this question depends upon the authority one quotes, and there is no final reply ready. The best recent study is that of Capper and Schless who, in a study of one thousand and seventy-four newborn found the thymus enlarged in three hundred twenty-two, or thirty per cent, and of this number fifteen, or 4.7 per cent, showed symptoms. Therefore, of one thousand seventy-four newborn, only fifteen or 1.4 per cent presented the thymic syndrome. Hence Capper and Schless conclude that "true hypertrophy of the thymus gland in the newborn causing tracheostenosis and the typical chain of symptoms is much rarer than it is commonly believed to exist." In keeping with these findings one must conclude that thymus disease is not frequent. The general tendency among some investigators seems to be in this direction. Chevalier Jackson, in his classic and pioneer researches, reported unmistakable cases of tracheostenosis observed bronchoscopically due to pressure of the thymus upon the trachea with a consequent narrowing. In a recent communication, Jackson states that a partial review of his records shows one hundred twenty-seven cases out of two thousand one hundred eighty-two children with endoscopic findings of thymus compression, these having been brought to him for various causes, including foreign body suspected or known to be present, the diagnosis of enlarged thymus being made routinely, I infer. The incidence, then, in Jackson's cases is 5.8 per cent. These cases were in children of all ages and the figures should not be quoted for the newborn alone, the newborn number probably being quite small. Yet Finklestein states he has never seen a case of thymic asthma with definite compression of the trachea. Friedleben, in 1858, as a result of experimental and clinical investigation, stated: "There isn't any thymic asthma!"

Complimentary space available to members for three consecutive months. For non-members, the rate is $5.00 each month for each inch of copy or fraction thereof.

(Continued from Page 85)

AMERICAN ACADEMY OF PEDIATRICS, spring meeting, Sheraton-Park Hotel, Washington, D.C., Apr. 10-12. For information write E. H. Christopherson, M.D., 1801 Hinman Ave., Evanston, Ill., Executive Director.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Sheraton Hotel, Philadelphia, Apr. 24-26. Hiram T. Langston, M.D., 308 Carondelet Bldg., 7730 Carondelet Ave., St. Louis 5, Secretary.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Americana Hotel, Miami Beach, Fla., Apr. 21-28. Mr. Donald F. Richardson, 79 W. Monroe St., Chicago 3, Executive Secretary.

AMERICAN COLLEGE OF SURGEONS, Fifth Postgraduate Course on Fractures and Other Trauma, John B. Murphy Memorial Auditorium, Chicago, Ill., Apr. 19, 20, 21, 22, 1961. Write John J. Fahey, M.D., Chicago Committee on Trauma of the American college of Surgeons, 1791 West Howard St., Chicago 26, Ill.

ARKANSAS, MEDICAL SOCIETY (open to A. M. A. members), Hotel Marion and Robinson Auditorium, Little Rock, Apr. 16-19. Mr. Paul C. Schaefer, 218 Kelley Bldg., P.O. Box 1345, Fort Smith, Ark., Executive Secretary.

SOUTHWESTERN SURGICAL CONGRESS (A. M. A. members may attend), St. Louis, Apr. 10-13. Mary O'Leary, 301 Pasteur Bldg., Oklahoma City 3.

SOUTHWEST CHAPTER OF THE SOCIETY OF NUCLEAR MEDICINE, Ramada Inn, Oklahoma City, April 8, 9. Write Mr. Winfield Evans, St. Anthony Hospital, Oklahoma City.

UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE SHORT COURSE, Surgery—Techniques of Cardiac Resuscitation. April 12. Medical school auditorium. Write Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th, Okla. City, Okla.

UNIVERSITY OF TEXAS POSTGRADUATE SCHOOL OF MEDICINE, Second Annual Contact Lens Course. April 19, 20, 21. Houston, Texas. Course limited to board certified ophthalmologists or residents and fellows in ophthalmology. Write University of Texas Postgraduate School of Medicine, 410 Jesse Jones Library Building, Texas Medical Center, Houston, Texas.

MAY

AMERICAN COLLEGE OF PHYSICIANS, Americana Hotel, Miami Beach, Fla., May 8-12. Edward C. Rosenow Jr., M.D., 4200 Pine St., Philadelphia 4, Executive Director.

AMERICAN GYNECOLOGICAL SOCIETY, The Broadmoor, Colorado Springs, Colo., May 29-31. Albert H. Aldridge, M.D., 899 Park, Ave., New York 21, President.

AMERICAN OPHTHAMOLOGICAL SOCIETY (members only), The Homestead, Hot Springs, Va., May. Joseph A. C. Wadsworth, M.D., 108 E. 68th St., New York 21, Executive Secretary.

AMERICAN ORTHOPAEDIC ASSOCIATION (members and guests), The Ahwahnee, Yosemite, Calif., May 22-25. Lee Ramsay Straub, M.D., 535 E. 70th St., New York 21, Secretary.

AMERICAN PEDIATRIC SOCIETY, Hotel Traymore, Atlantic City, May 2-3. Conrad M. Riley, Denver General Hospital, Denver 4, Secretary.

AMERICAN PSYCHIATRIC ASSOCIATION, Morrison Hotel, Chicago, May 8-12. C. H. Hardin Branch, M.D., 156 Westminster Ave., Salt Lake City 15, Utah, Secretary.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Eden Roc Hotel, Miami Beach, Fla., May 5-7. Mr. G. Tod Bates, 350 Post St., San Francisco 8, Executive Director.

AMERICAN THORACIC SOCIETY, Netherland-Hilton, Cincinnati, May 22-24. Mr. Frank W. Webster, 1790 Broadway, New York 19, Executive Secretary.

AMERICAN UROLOGICAL ASSOCIATION, INC., Biltmore Hotel, Los Angeles, May 22-25. Mr. William P. Didusch, 1120 N. Charles St., Baltimore 1, Executive Secretary.

KANSAS MEDICAL SOCIETY (members and guests), Broadview Hotel, Wichita, May 1-3. Mr. Oliver E. Ebel, 315 W. Fourth, Topeka, Kan., Executive Secretary.

LOUISIANA STATE MEDICAL SOCIETY, Hotel Roosevelt, New Orleans, May 8-10. C. Grenes Cole, M.D., 1430 Tulane Ave., New Orleans 12, Secretary-Treasurer.

NEW MEXICO MEDICAL SOCIETY, La Fonda, Santa Fe, N.M., May. Mr. Ralph B. Marshall, 220 First National Bank, Albuquerque, N. M., Executive Secretary.

OKLAHOMA STATE MEDICAL ASSOCIATION, Mayo Hotel, Tulsa, Okla., May 7-9. Mr. R. H. Graham, Box 9696, Oklahoma City, Okla., Executive Secretary.

UNIVERSITY OF OKLAHOMA MEDICAL CENTER POSTGRADUATE SHORT COURSE, Pediatrics—Infectious Diseases in Infancy and Childhood. May 10. Medical school auditorium. Write Postgraduate Education, University of Oklahoma School of Medicine, 801 N.E. 13th, Okla. City, Okla.

JUNE

AMERICAN COLLEGE OF CHEST PHYSICIANS, Hotel Commodore, New York City, June 22-26. Mr. Murray Kornfeld, 112 E. Chestnut St., Chicago, Executive Director.

AMERICAN DERMATOLOGICAL ASSOCIATION, INC. (members only), Castle Harbour Hotel, Tucker's Town, Bermuda, June 16-20. Wiley M. Sams, M.D., 25 S.E. Second Ave., Miami 32, Fla., Secretary.

AMERICAN NEUROLOGICAL ASSOCIATION, Hotel Claridge, Atlantic City, June 12-14. Melvin D. Yahr, M.D., Neurological Institute, 710 W. 168th St., New York 32, Executive Secretary.

AMERICAN RHEUMATISM ASSOCIATION, Hotel Roosevelt, New York City, June 22-23, 1961. Mr. Gerard W. Speyer, 10 Columbus Circle, New York 19, Executive Secretary.

SOCIETY OF NUCLEAR MEDICINE, Penn Sheraton Hotel, Pittsburgh, June 14-17. Mr. Samuel N. Turiel,

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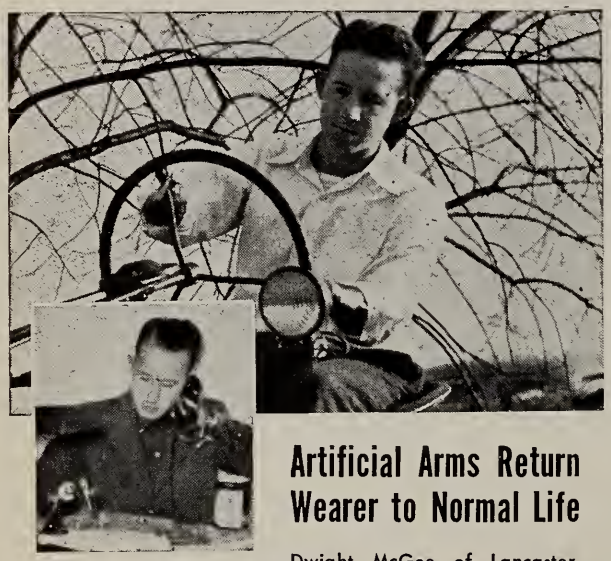
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430 N. Michigan Ave., Chicago 11, Executive Administrator.

JULY

INTERNATIONAL COLLEGE OF SURGEONS, NEW ENGLAND REGIONAL MEETING, Chatham Bars Inn, Chatham, Cape Cod, Mass., July 1-4. M. Leopold Brodny, M.D., 4646 N. Marine Dr., Chicago 40, Treasurer.

SEPTEMBER

AMERICAN HOSPITAL ASSOCIATION, Atlantic City, Sept. 25-28. Mr. Maurice J. Norby, 840 North Lake Shore Dr., Chicago 11, Secretary.

COLORADO STATE MEDICAL SOCIETY, Shirley-Savoy Hotel, Denver, Sept. 19-21. Mr. Harvey T. Sethman, 835 Republic Bldg., Denver 2, Executive Secretary.

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Palmer House, Chicago, Oct. 2-5. E. H. Christopherson, M.D., 1801 Hinmann Ave., Evanston, Ill., Executive Director.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct. 2-6. William E. Adams, M.D., 40 E. Erie St., Chicago 11, Secretary.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Oct. 15-20, 1961, Hotel Commodore, New York City. Write William B. Sherman, M.D., 60 East 58th St., New York 22, N.Y.

MARCH 1961

Volume 54 Number 3

Journal

OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

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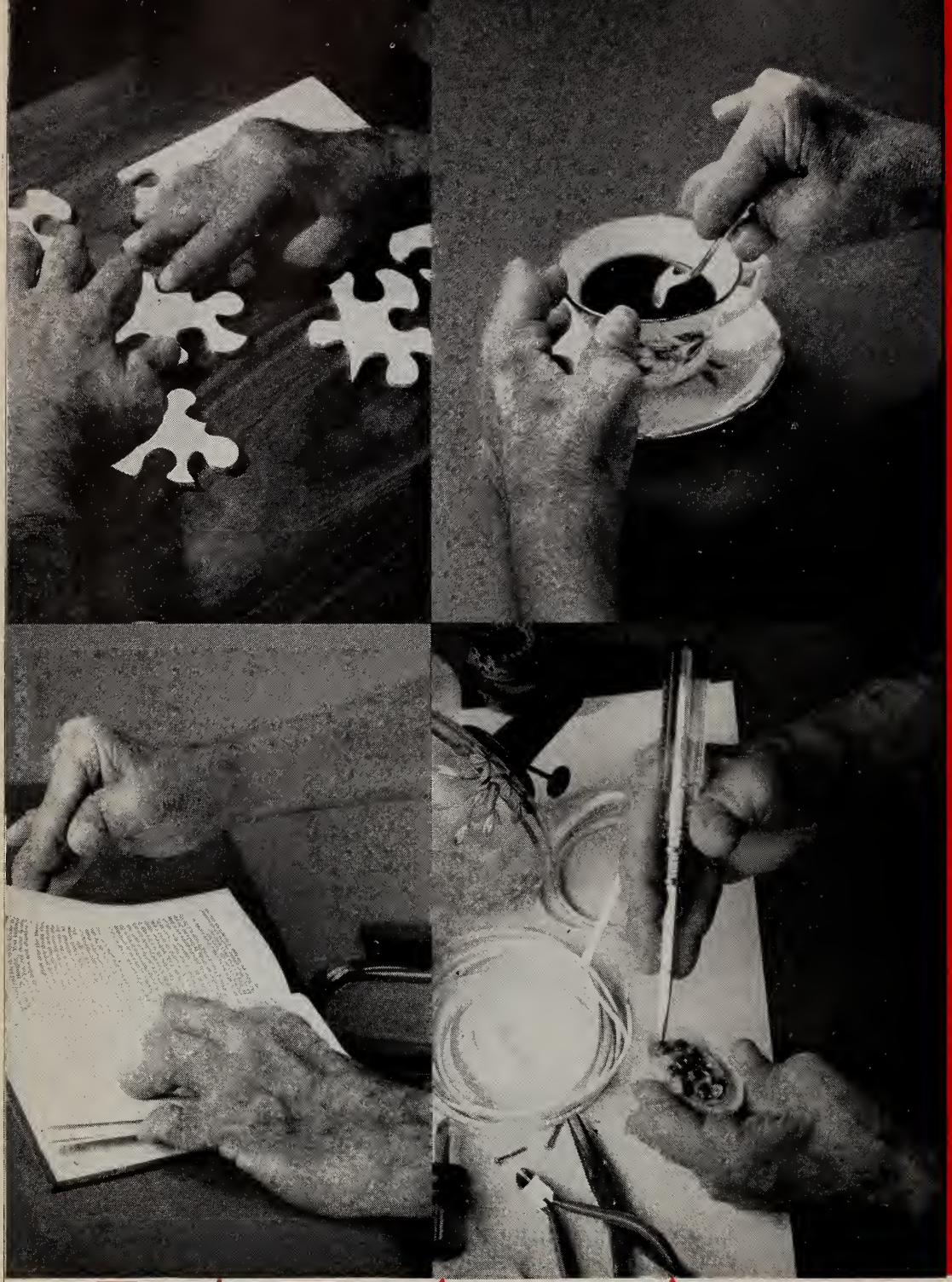
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1. Barden, F. W., et al.: J. Maine M. A. 46:99, 1955.
2. Ford, R. A., and Blanchard, K.: Journal-Lancet 78:185, 1958.

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Editorials

Inflation and Medical and Hospital Care

Doctor Annis did a splendid job against Walter Reuther in their debates on CBS. He presented medicine's point of view brilliantly and from what seemed a better background of knowledge than had Mr. Reuther. Nevertheless the controversy still rages and how the ball will bounce is yet unknown. Some consideration should be given to exploration of mechanisms if it bounces the other way. The availability of money is not enough.

It has been said and thought many times that the number of dollars that one plans for his retirement income is no hedge against inflation—that one needs something whose relative value goes up with a decreasing purchasing power of the dollar.

The only real hedge against the rising cost of hospital care in Oklahoma both for the man and his family and the hospitals is our Blue Cross service contract. Here the family is not dealing with dollars—Blue Cross has not agreed to supply him with dollars but has agreed through the hospitals to obtain for him the hospital care that he requires. This is possible because Blue Cross has also developed a means of protecting the hospitals by paying them a per diem which is based on the hospital's per diem cost. This is, of course, why it has been necessary for Blue Cross to increase its rates from time to time and why over utilization has caused the county rating program to be instituted. The small increases necessary to protect both the patient and the hospital against inflation is providing a service beyond compare and cannot in any other way with which I am familiar be duplicated.

Both the man and his family and the doctor would be similarly protected had we a Blue Shield service contract for medical care. Our dollar allowances from Blue Shield are now being gone over by the Association's Liaison Committee and Blue Shield. These are dollars, no services, and are no protection to either the patient or the doctor against inflation. A help, yes—but nothing really predictable far down the road for the doctor and nothing has ever been predictable for the man and his family except so many dollars toward his doctor's bill.

If this can be done for people and hos-

(Continued on Next Page)

COVER: *Time for the Truth*

Is organized medicine a selfish, "domineering trust"—a classic example of "autocratic rule"—a "negativistic stumbling block" in the path of American progress? Or is it really an exemplary system of **voluntary** self-government, which should be given its due as a unique, humanitarian American institution?

As physicians, we may honestly and proudly proclaim the latter as the correct definition!

American medicine is now under attack. The motivation of the AMA and its constituent societies crops up as a recurring argument, designed by our opponents to smoke-screen the real issues. Moreover, these articulate aggressors allege that the AMA's "wrong-doings" are dictated by a few bureaucrats, and are not representative of the rank and file medics. A concerted effort is being made to discredit us!

Let's set the record straight: first in our own minds, if necessary; then in the public's.

The physicians of this nation need not apologize for their individual or collective contributions to the health of the American people. With organized medicine as its architect, America's health care system is the world's unchallenged leader.

As to the charges of autocratic rule, any organization, governmental or otherwise, would be hard put to prove the same degree of unanimity which has always been present in the grass-roots democracy of organized medicine. Nearly one-fourth of the OSMA membership has a direct hand in policy-making, and the balance has the opportunity.

Let the socialistic planners anguish at our self-governing existence—but do not let them discredit our accomplishments and run roughshod over the rights of the people and the freedom of the profession!

pitals in Oklahoma, is there any reason why it cannot be done on a National level? The President's program for recipients of social security applies to hospital care, not medical care. If we permit this thing to end up with so many dollars for hospital care regardless of who dishes them out or what hospital gets them, we have no ability to learn from experience, and the hospitals will end up as we ultimately will with their hands out to government.

It is up to every one of us to protect the patients' medical future and the hospitals by using hospitals for Blue Cross patient care only when necessary and for no longer than is necessary. The very substantial hedging against inflation that both now have depends on it. We are playing for keeps, let's at least try to get in on the planning if the President's program becomes law. If so, we will have a little time to work out a service program for medical care that will offer the same predictable assurance to the people and ourselves as does Blue Cross to the people and the hospitals.

The Oklahoma Hospitals and D.P.W.

It is regrettable that a hassle has developed between the Hospital Association and the Department of Public Welfare over payments to hospitals for care of old age recipients of public assistance. Here, too, the welfare department has protected the hospitals against inflation by paying the per diem cost of the University Hospitals less a percentage for the cost of teaching as an arm of the School of Medicine. Several things seem important to me in this controversy which need to have the proper weight attached.

1. In asking government to pay full cost for hospitalized patients who are in the category of assistance without genuine consideration for the other needs that must be met for these people and the amount of money that is available to meet these needs, are we not throwing in the sponge and asking government to use its taxing power to socialize hospital care.

2. Are we thinking straight when we regard people on old age assistance as indigents and as wards of the state? Is it not just the group that is indigent and a charge of the state whereas the individual known to us or the relative is a fine old person who has been a good citizen and is entitled to his pension? I support the latter view and believe that the peace of mind that goes with a monthly income and the pooling of their funds for medical care is just as important to their health and welfare as are beans and potatoes.

3. The patients involved are people who have only about $1.00 per day with which to buy food.

4. The State has no family responsibility law.

5. The allowance for care is considerable even though not as adequate toward meeting costs as the hospitals would like.

6. It has been tied to the University Hospitals cost and in this way will fluctuate with costs as is apparent from the fact that the per diem has gone up from $15.00 per day to $20.93 per day in less than four years.

7. Blue Cross has been very liberal in letting the hospitals figure their costs because the plan feels that its contract holders are private patients and as such must help in defraying the cost of caring for those not quite able to manage as do other private paying patients. Perhaps some of the Hospital Association's thinking in the matter has been conditioned by the attitude of Blue Cross.

8. The hospitals have been permitted to collect insurance and from relatives, a privilege which is, I think, denied in other states. The only restriction is that they are not allowed to bill the patient himself.

Since we the physicians are the people who admit and discharge patients from the hospitals, much of the responsibility for conserving the funds in both Blue Cross and the Welfare Department so that they can do what they are intended to do rests on us. If we realize this, a concerted effort by each of us can go a long way toward making this pooling technique an effective, solvent, and satisfactory way of continuing to provide hospital care by a means that assures care whatever may be the purchasing power of the dollar.—*B.H.N.*

Letter to the Editor

The following letter on the subject discussed in the preceding editorial was received from Mark Johnson, M.D. Doctor Johnson is Secretary-Treasurer of the Association and Chairman of its Council on Socio-Economic activities. He has served on the Department of Public Welfare and as Chairman of the Association's Welfare Committee.

To the Editor
Journal of the
Oklahoma State Medical Association

Dear Sir:

In preparing and distributing its brochure entitled "Financing Hospital Care in Oklahoma Hospitals for Those Unable to Pay," The Oklahoma Hospital Association has achieved a new pinnacle of crassness. The basic objectives of the brochure are selfish and short-sighted. To promote total supplantation of personal, family and local community responsibility in the care of medically indigent persons is to promote socialism in its pure raw and repugnant form.

Standing as the prime example of the puerile logic which afflicts the entire pamphlet is this statement:

" . . . Generally a physician's charitable work involves *only** a voluntary sacrifice of his professional services and time. On the other hand hospital care involves services of salaried employees and services and materials which the hospital must pay for."

If it were not so manifestly ridiculous such an evaluation of the physicians' contributions to the indigent sick would represent a monumental insult. Such a statement is so barren of reason and understanding that it seems silly to challenge it. However as incredible as it may seem there are some (apparently influential) members of the Oklahoma Hospital Association who feel that any fee paid to physicians represents "pure gravy." These individuals refuse to acknowledge the fact that the physician's contributions also involve ". . . services of salaried employees and services and material which the . . ." physician must pay for. No consideration is given to the fact that the medically indigent patients in the hospitals are cared for prior to their admission and will be cared for subsequent to their discharge from the hospital by a physician who will in all probability receive little or no remuneration for the months of care rendered.

Apparently certain hospital administrators view the contributions of time made by staff physicians as they view free air and water at a service station. No amount of reasoning will make them appreciate the fact that an hour of time donated by the physician is also an hour of rent, and an hour of utilities, and from two to six hours of salaried employee's time. In addition to these significant expenses, of course, there is the matter of transportation to and from the hospital which is provided by the physician and at his expense.

Such an illogical and unfair evaluation of the physician's services would be disappointing regardless of its source; that it was conceived and publicized by the Oklahoma Hospital Association is unbelievably shocking.

Throughout the narrative in the brochure there is a tone which seems to imply that hospitals render care which is totally independent of physicians' services. It speaks of a "medical work-up," a "physical build-up," as though these things were achieved by the hospital itself. It comments that "the hospitals furnish nursing care . . . a detailed record of the patients' medical history and hospital stay . . . x-ray tests and treatments . . ." as though they were outgrowths of the walls and ceilings of the hospital and fell like ripened fruit into the patient's lap.

How primitive it is to find it necessary to point out that hospitals provide only tools and facilities for medical care and nothing else. Nursing care is provided by nurses. X-ray machines, laboratory and diagnostic equipment become therapeutic tools only in the hands of the physicians who staff the hospitals. Medical records are created by physicians and nurses, not by hospitals.

Unproductive instruments are sometimes used in the treatment of diseases and injuries. In most instances they represent tools which are constructed and provided not only voluntarily but eagerly by

*Italics mine.

communities and churches. Only a few ill advised groups ever ventured into the provision of a hospital with a profit motive; repeated economic calamities have almost totally discouraged such motivation. Obviously the Catholics, the Presbyterians, the Baptists, the residents of Citizenville did not expect a dollar profit from their hospitals. Indeed I am convinced they looked upon each hospital as a dollar-wise expense and felt that the profit was richly returned in Christian service and human securities. Now, however the Oklahoma Hospital Association not only seeks but is virtually demanding a guaranteed balanced budget. And the most appalling feature of their demand is that it is being made of the taxpayer not directly but through a welfare agency.

One cannot but wonder if the objectives portrayed by the Oklahoma Hospital Association truly represent the philosophies of their individual boards of directors and trustees. Certainly they cannot represent the convictions of their professional staffs. For if it is right and just and good for Oklahoma taxpayers to buy up all the family responsibility, all the community pride and all the Christian spirit in caring for the medically indigent, it is just as right for the federal taxpayers to do the same thing on a national scale. In short it is justification for the total socialization of hospitals throughout the United States.

And if the Hospital Association should accomplish such objectives we can rest assured that some administrator will recall that "physician's charitable work involves *only** a voluntary sacrifice of his professional services and time . . ." and suggest, as a casual afterthought, that we should be subsidized also.

*Italics mine.

MEDICS IN DEFENSE



Treatment Principles for Disaster Emergency Medical Care

If maximum care is to be provided to the greatest number of mass casualties under the conditions of austerity that are expected to prevail following an all-out attack, it is imperative that:

1. Treatment procedures and principles at all levels be designed to result in the greatest good to the greatest number within the means available.
2. Treatment procedures in disaster and support areas be simplified and standardized.
3. The control of hemorrhage, the attainment and maintenance of a patent airway and the treatment of shock are the critically essential life-saving measures that receive the highest priority at all levels.
4. During the emergency period following a mass attack on the United States, no treatment procedure should be performed that renders a casualty less able to care for himself.
5. Treatment procedures be designed to preserve life over limb and function over appearance.
6. Casualties requiring only self-aid, first aid or out-patient care will be treated as indicated in disaster or support areas, while admission to hospitals must be reserved for more seriously ill patients.
7. Psychologically disturbed individuals should not be admitted to hospitals treating the injured.
8. No patient should be removed from his litter or improvised stretcher until he has reached a place of definitive treatment or removal is otherwise essential.
9. Similar types of cases should be grouped to the extent practicable to simplify, standardize and expedite treatment.
10. Medical laboratory procedures should be held to the absolute minimum.
11. X-ray examinations should be held to the absolute minimum.
12. Blood typing of casualties should be carried out prior to transfusion and cross-matching should also be carried out, if practicable.
13. Casualties should be transferred to convalescent facilities or discharged and treated on an out-patient status as early as possible.

Dilantin is the second ranking drug for producing intoxication. It must be given with caution and written instructions regarding its administration.

Diphenylhydantoin Sodium (Dilantin®) Intoxication in Children

LUCIUS WAITES, M.D.
THOMAS O. NICKLAS

Since graduating from the University of Tennessee College of Medicine in 1947, Lucius Waites, M.D., has been certified by the American Board of Pediatrics. He is Assistant Professor of Pediatrics and Neurology at the University of Oklahoma School of Medicine.

Thomas O. Nicklas is a third year medical student at the University of Oklahoma School of Medicine and trainee, USPHS Grant, No. 2B-5266.

DIPHENYLHYDANTOIN SODIUM (Dilantin) is a drug that has been used effectively for certain major convulsions (grand mal) since 1938. Recent experience has focused our attention on the unusual number of children with evidence of toxicity from this drug. It is not known at this time if certain children are unusually sensitive to this drug, or if toxicity is always produced by an overdosage. It has become obvious that caution must be employed in prescribing this drug for children.

There have been nine patients admitted to Children's Memorial Hospital because of Diphenylhydantoin Sodium (Dilantin) intoxication since July 1, 1958. Dilantin ranks second only to aspirin intoxication in Children's Memorial Hospital, as there were fifteen patients with aspirin intoxication admitted to the hospital during the same period of time. Phenothiazine-derivative intoxication prompted eight admissions during these months.

Dilantin Intoxication

A review of the records of patients with Dilantin intoxication reveals the youngest patient to be two years of age and the oldest patient to be thirteen years of age.

Six patients received an over-dosage of Dilantin because the physician prescribed too much medication. One patient was given intoxicating dosage because of an incorrectly filled prescription. In one patient a combination of factors, i.e., an incorrectly filled prescription and misunderstanding by the mother, resulted in too much medication. One two-year-old child accidentally ingested a large quantity of Dilantin suspension.

Symptoms of Intoxication

The most common symptoms in our group of patients were unsteadiness, nausea and extreme irritability. Other symptoms in order of their frequency were vomiting, slurring of speech and apathy. Symptoms which

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must be kept in mind in Dilantin intoxication are dizziness, fatigue, hallucinations and delusions, insomnia, ocular pain, skin rash, and unusual emotional lability. The best clinical description of the emotional lability of a child with Dilantin intoxication is that the child's actions resemble an adult moderately inebriated with alcohol.

Signs of Intoxication

The most common signs in our experience were truncal ataxia, incoordination of the extremities, and tremors. Extreme emotional lability was a common sign. Anorexia and vomiting were also prominent, and other clinical evidences were hypertrophied gingiva, dermal eruptions, eosinophilia, ptosis, nystagmus, diplopia, slurring of speech and hypotonia.

Leukopenia is always mentioned as a prominent sign of Dilantin intoxication, but this finding was not present in any of the patients in this series.

Dosage

The authors suggest that phenobarbital tablets in appropriate dosage be given for all convulsions in children regardless of the characteristics of the attacks. Then, appropriate adjunctive therapy is given in regulated dosage in addition to the phenobarbital tablets. Consequently, Dilantin is considered adjunctive therapy in children so that smaller doses may be given and toxicity prevented.

The optimal dosage of Dilantin is the smallest amount that will effectively control the convulsions without producing symptoms and signs of intoxication. The dosage, therefore, cannot be given in relation to body weight or body surface area. The amount of the drug which produced intoxication in our patients varied from 150 mgm/24 hr. to 1200 mgm/24 hr. (The above amounts are equivalent to 15 mgm/kilogram body per day to 66 mgm/kilogram/body weight per day.) The severity of the signs of intoxication did not necessarily increase with larger dosage. Hypertrophy of the gums is not a contraindication to continued therapy, but other signs listed are sufficient evidence to discontinue medication.

We have had no experience with parenterally administered Dilantin in children. Reports in the literature indicate that extreme caution must be employed in the use of parenteral Dilantin (references 1 and 2).

Summary

Dilantin may be used as adjunctive therapy in children with some major convulsions (grand mal). It must be given with caution, and it is suggested that the mother of the child be given written instructions regarding schedule and dosage. Any unusual reaction in the child should be reported to the physician immediately.

Experience with Dilantin intoxication for the past thirty months in Children's Memorial Hospital is presented.

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Lucius Waites, M.D.
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Missile type lawn mower injuries frequently are difficult to treat and tend to cause disability. Three cases are presented.

Rotary Lawn Mower Injuries*

THOMAS H. HENLEY, M.D.

In 1950, Thomas H. Henley, M.D., graduated from the University of Oklahoma School of Medicine where he is now serving his third year residency in General Surgery.

ROTARY power lawn mowers continue to be a serious cause of bodily injury. Reports in the medical literature and our experience at the University of Oklahoma Medical Center indicate an increase in the frequency of missile-type injury. McClure[1] reports on a survey conducted in Georgia in which 794 power lawn mower injuries were recorded by 226 physicians. However, only 43% of the doctors receiving questionnaires returned them. Objects thrown by the blades of the mower caused 30% of the injuries. Eye injuries constituted 16.2% of this latter group. Of the total injuries, 9.3% developed some complication and 14.1% had permanent disability. Butterworth[2] reports a serious head injury with resulting convulsions in a fourteen month female, who was injured when a lawn mower blade struck a solid object, which ricocheted and struck her. He estimates that there were fifty thousand rotary power lawn mower injuries in the United States in 1956. McClure[3] thinks that there are three major causes for such injuries. These are as follows: 1) Faulty design of mowers with poorly guarded moving parts and without sufficient marking of danger areas. 2) Carelessness on the part of the operator. He suggests that detailed instructions in use of the mowers should be given by the retailers. 3) Missiles: These injuries could be prevented by having safely constructed machines and by clearing all debris from the mowing area. In Oklahoma, no accurate account of the number of such injuries is possible since they are not recorded or coded as lawn mower injuries and most of them are treated in emergency rooms or in doctors' offices. In the *Oklahoma State Medical Journal*[4] one missile-type injury was reported. The following three cases are representative of the cases seen at University Hospitals since publication of the last report.

*From the Department of Surgery, University of Oklahoma Medical Center, Oklahoma City, Oklahoma.

Case I

History: This patient was an eighteen year old, colored male who was in good health until the morning of August 27, 1960 when he was mowing the lawn with a rotary power lawn mower. The mower made a noise as though it had hit something and, at the same instant, the patient suffered an excruciating abdominal pain which caused him to fall to the ground. He did not become unconscious and had minimal bleeding. There was no nausea or vomiting and the urine was free of gross blood. He was immediately taken to the Emergency Room at the University Hospital.

Physical Examination: Revealed a well developed, well nourished colored male with severe abdominal pain. Blood pressure was 110/75 mm Hg, pulse 88 per minute and regular, respiration 18 per minute. The heart and lungs were clear. There was a two

centimeter laceration of the skin in the left upper quadrant of the abdomen just above the umbilicus. There were no palpable masses or viscera in the abdomen. There was tenderness to palpation throughout the right side of the abdomen, particularly in the right upper quadrant near the midclavicular line just below the right costal margin. There was no rebound tenderness. Rectal examination was negative.

Laboratory Data: On the day of admission the hemoglobin was 16.3 grams, hematocrit 44%, urinalysis was normal. X-rays of the abdomen disclosed a foreign body lying in the vicinity of the right kidney (figures 1 and 2).

Hospital Course: Under general anesthesia exploratory laparotomy was performed. Approximately one liter of blood was present in the peritoneal cavity, pelvis and lesser omental bursa. There was a hematoma of the gastrocolic omentum that measured 10 x 4 x 4 cm.; a perforation of the posterior wall of the stomach measuring 2 millimeters in diameter, and another, of similar size, at the edge of the greater curvature of the stomach. There was a retroperitoneal hematoma in the region of the mesentery of the hepatic flexure of the colon and lateral leaf of the mesentery of the small bowel. There was also a retroperitoneal hematoma, medial and superior to the right kidney, which reached to the loop of the duodenum. The hematoma was resected and the perforations of the stomach closed with -0000- purse-string silk sutures. The remaining mesentery of the transverse colon was sutured to the wall of the stomach, closing the lesser omental bursa. Blood and fluid were aspirated from all gutters and cavities of the peritoneum. The abdomen was closed with -00-, -000-, and -0000- silk sutures. Following operation, the patient's temperature rose to 100.4 degrees on the fourth postoperative day and he was afebrile by the sixth postoperative day. His Levin tube was removed on the second postoperative day. Penicillin and streptomycin were administered twice daily during his hospital stay. He was discharged on the eleventh postoperative day.

CASE I

Fig. 1 Fig. 2



Follow Up: This patient returned three weeks postoperatively with cramping abdominal pain increasing in severity. There was no nausea or vomiting. A diagnosis of mechanical intestinal obstruction was made. The patient's abdomen was surgically explored. A partial wound dehiscence containing an adherent loop of obstructed small bowel was found. The adhesions were lyzed, the wound was closed, and the patient's postoperative course was uneventful. He was discharged ten days after admission.

Case II

History: A 6 year-old-male child was standing approximately 18 feet from a rotary power lawn mower, which was being operated by someone else, when an object, thought to be a rock, was thrown from the mower. The child sustained a deep, penetrating wound in the lower posterior medial aspect of the right upper arm. He was brought immediately to the Emergency Room at the Children's Memorial Hospital.

Physical Examination: The positive physical findings were limited to the right upper extremity. There was a deep, gaping 5 centimeter wound approximately 3 centimeters above the right medial humeral condyle. Examination of the arm revealed definite ulnar nerve involvement. The child was unable to abduct or adduct his fingers. There was hypesthesia of the fourth and fifth fingers.

Laboratory Data: Complete blood count and urinalysis were normal. X-ray examination of the right arm revealed no fracture or dislocation.

Hospital Course: The patient was given three thousand units of tetanus antitoxin after skin testing, 0.5 cc of tetanus toxoid, streptomycin 0.2 grams twice daily, and Achromycin 250 mgm. three times daily. The wound was explored surgically and revealed complete division of the triceps mus-

cle and ulnar nerve. The wound was irrigated thoroughly with septisol and saline. The ends of the nerve were approximated with interrupted -000000- silk sutures, placed in the perineural sheath. The skin edges were debrided and the skin closed with interrupted -0000- silk sutures. The arm was placed in an anterior posterior splint with the metacarpal-phalangeal joints extended and the distal phalanges flexed in a position of function. The postoperative course was uneventful and the child was discharged on the second postoperative day on Achromycin 250 mgm. three times daily. Two weeks later, the child was seen in the Surgery Clinic and the wound was healed without infection. The prognosis is poor for such ulnar nerve injuries.

Case III

History: On the afternoon of 7-3-60, at approximately 6:00 p.m., the patient was mowing grass with a power mower. He walked away from the mower while it was running. At that moment something struck him in the chest and knocked him down. He then noted blood on the left upper chest. He was taken to Ada, Oklahoma, where roentgenograms revealed a small piece of metal in the left middle lung field. He was referred to the University Hospital.

Physical Examination: Pulse was 130 per minute, blood pressure was 120/70 mm Hg, the respiratory rate was 36 per minute, temperature was 98.6 degrees Fahrenheit. The patient was a well developed, well nourished, apprehensive white male in no acute distress. There was a one centimeter laceration over the left second intercostal space, lateral to the left midclavicular line. The heart and lungs were otherwise normal. The rest of the physical examination was within normal limits.

Laboratory Data: Urinalysis was normal. Hemoglobin 13.0 grams%, hematocrit 42%, WBC 8,750 with 34 neutrophils, 64 lymphocytes, 2 monocytes. Roentgenograms of the chest showed a 7-8 millimeter metallic density in the left lung field at the level of the seventh rib posteriorly. The metallic density was seen in the mid-lung field on the lateral views. There was no evidence of either pneumothorax or hemothorax. There was a slight infiltration noted around the metallic density. Subsequent films revealed subsidence of the infiltration (figures 3 and 4).

Hospital Course: The patient was given 0.5 cc tetanus toxoid since he had previously been actively immunized. He was given procaine penicillin 600,000 units intramuscularly every six hours and streptomycin 0.5 grams every twelve hours. The patient had a temperature of 100 degrees orally on the first day of admission. This returned to normal on the third day. He was discharged on oral penicillin on the fifth hospital day. He was seen on 7-24-60 in the Surgery Chest Clinic at which time the temperature was normal and the lungs were clear. The x-ray was described above. The patient is still being followed in the clinic.

Summary

This is a follow up report on missile-type power lawn mower injuries. Three cases from the University of Oklahoma Medical Center are reported. Although injury due to contact with the blade of the power lawn mower is more common than injury due to missiles, it is apparent that the missile injury is more serious and more difficult to treat. This type of injury is already a serious problem, and may become more frequent with increased use of power lawn mowers. Practicing physicians can help to combat this problem by alerting patients to the danger involved in using these mowers. It would also be helpful if a survey of the incidence of this type of injury in the State of Oklahoma was conducted, perhaps by the Oklahoma State Department of Health.

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CASE III

Fig. 3

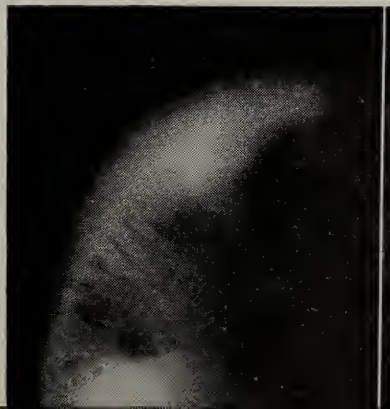
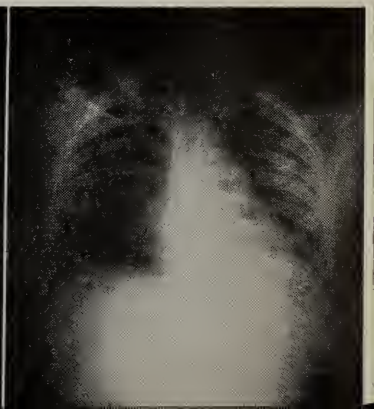


Fig. 4



CLINICAL PATHOLOGIC CONFERENCE

Veterans Administration Hospital

December 22, 1959

Edited by W. O. Smith, M.D., Assistant Professor of Medicine, University of Oklahoma School of Medicine.

Guest Discussant: *Isadore Snapper, M.D., Visiting Professor and Consultant, is Director of Medicine and Medical Education, Beth El Hospital, Brooklyn, New York.*

THE PATIENT was a 62 year old white male automobile mechanic who was first admitted to the Oklahoma City V. A. Hospital on November 14, 1955, because of cough, chills and profuse diaphoresis for two months. Two months before admission he developed an upper respiratory infection characterized by cough, chills and fever which failed to resolve promptly despite the administration of penicillin for two weeks by his physician. He continued to cough and feel weak and lost 16 pounds of weight during the ensuing two months. Initially he produced blood-streaked sputum on several occasions.

Examination at this time revealed a normal temperature; dullness to percussion, absent breath sounds and increased vocal fremitus in the lower right chest; and decreased excursion of the right chest. One observer reported a palpable spleen. Chest roentgenogram revealed homogenous opacification of the right lower lung field. Occasional fibrocalcific deposits were noted in the left upper and mid lung field with some hilar calcification. Hemogram showed 9.2 Gms. % of hemoglobin, an hematocrit of 30%, and a white blood cell count of 2,300 with 26% neutrophils, 66% lymphocytes and 8% eosinophils. L. E. cell preparations were negative. Thoracentesis was performed on three occasions. The fluid appeared blood-tinged and serous; no malignant cells were seen and no organisms were found on culture for pyogens and acid-fast bacilli. Repeated sputum cultures, gastric washings and bronchial washings were negative for acid-fast bacilli and fungi as were bone marrow cultures. Bone marrow biopsy showed some areas of increased cellularity. Bronchoscopy was not remarkable. Second strength tuberculin skin test showed a 1 cm. area of induration as did the histoplasmin. The neutropenia persisted during hospitalization but some improvement was noted. The patient was treated with streptomycin and INH for five weeks. By the time of discharge, two months after admission, he was feeling better. His cough had diminished and he had gained weight. Roentgenogram of the chest revealed considerable improvement.

He was next admitted on November 19, 1956, one year later, because of continuing weakness. At this time the additional history was obtained that the patient had been using benzine for five years to clean engine parts in a closed area. Examination revealed

hepatomegaly and splenomegaly, each organ extending about 5 cm. below the respective costal margin.

The hemoglobin was 11 Gm. % and the hematocrit 37%. White blood count varied from 3,100 to 4,400 with about 40% neutrophils and 60% lymphocytes. Reticulocyte counts ranged from 0.4-1.5%. Total protein and liver function studies were not abnormal. Bone marrow aspiration revealed decreased cellularity. Cr^{58} RBC life span study showed a T ½ of 24 days (normal = >25 days). Chest roentgenogram revealed blunting of the right costophrenic sulcus and pleural reaction. After some two months in the hospital, without specific therapy, the patient felt better and was discharged.

His third and final admission occurred on February 25, 1957, about 15 months after his first admission. Two weeks previously he developed profound weakness and one week before admission had developed repeated shaking chills, fever and profuse diaphoresis. Examination revealed an acutely ill man with a temperature of 103 degrees and a lemon-yellow pallor. Dullness was noted in the right lung field and a grade 1 systolic murmur was heard at the heart apex. Hepato-splenomegaly was again found. A gross tremor of the extremities was observed.

Hemogram showed a hemoglobin of 5.8 Gms. %, hematocrit of 20%, platelet count of 10,000 and white blood cell count of 500 with 8% neutrophils and 92% lymphocytes. 2+ albumin and numerous bacteria were found in the urine. Blood calcium was 3.8 mEq./L. and phosphorous 4.2 mg. %. The NPN rose from 34 to 84 mg. %. Coombs test was negative. Bone marrow culture revealed no growth. Blood culture revealed *Diplococcus pneumoniae* and the throat culture, *Klebsiella pnuemoniae*. Spinal fluid was not remarkable. Roentgenogram of the chest revealed a minimal fibrotic reaction in the left upper lung. Six days later, eight days before death, a chest roentgenogram showed a diffuse, mottled appearance throughout both lungs.

The patient was treated with very large doses of penicillin and streptomycin and was given a number of blood transfusions. He continued to have a septic course. One day prior to death, white mucoid patches were noted on the mouth and tongue and Mycostatin therapy was started. He died on March 12, 1957.

Doctor Smith: Doctor Glasser would you show us the roentgenograms and discuss them with us.

Doctor Glasser: The first chest film we have was taken four days prior to the patient's first admission to the hospital. We note evidence of moderate pleural fluid formation in the right chest which obscures the normal parenchymal markings in the lower half of the right lung. The left lung appears clear. The next two films were taken three days following admission of the patient to the hospital. Both the PA and right lateral projections show evidence of an infiltrate—small, patchy and tight, but very poorly defined and localized to the posterolateral segment of the right middle lobe. We note in the lateral projection some loculation of the pleural fluid posteriorly. The serial films made subsequently show very little change in the infiltrate. The pleural reaction appears to be slowly subsiding. There is still some evidence of fluid which seeks the dependent portion of the right chest. In the last film previous to his first discharge we still see residual evidence of both the parenchymal and pleural involvement.

During his second admission, PA and lateral views of the chest were taken. On close examination of these films, we see evidence of the parenchymal infiltration within the middle lobe with a downward displacement of the minor fissure. There is pleural scarring. The left lung still appears quite clear of any involvement. Abdominal films show a prominent splenic shadow. The liver appears to be enlarged also but we do not see it sufficiently clear to note its inferior border in the survey film of the abdomen.

During the patient's third and final admission, there were four films of the chest. The first one shows little change in the appearance of the lungs contrasted with the previous films. The lung markings do appear somewhat heavier and more prominent, but we must remember that this patient was

quite ill and could not cooperate and inspire fully. The film dated March 1, 1957, was made 7 days prior to death, and for the first time we note a disseminated mottling of both lungs. The final film, dated March 4, 1957, shows perhaps more strikingly this mottled appearance of the lungs.

In summary, we have radiographic evidence of what appears to be, with full consideration of the clinical findings and course of the patient, a chronic inflammatory process involving the parenchyma of the lung and pleura which appears to have been smoldering over a period of a year and a half. The process cleared somewhat and then recurred and apparently disseminated widely prior to his death. We cannot, of course, more clearly identify this process from our radiographic observations. There are many conditions which must be considered in the differential diagnosis which I am sure our distinguished guest will cover.

Doctor Smith: Thank you very much Doctor Glasser. Are there any questions of Doctor Glasser? If not, I should like to introduce our visiting professor, sponsored by the V. A. Hospital, Doctor Isadore Snapper. Doctor Snapper is Director of Medicine and Medical Education at the Beth El Hospital, Brooklyn, New York. Doctor Snapper, we should appreciate your comments on the case.

Doctor Snapper: I don't need to tell you that an expert "CPC man" looks upon these protocols not only as purely mathematical things, but also with the surrounding circumstances in mind. I know from bitter experience that if I go somewhere where I've never been before and my hosts go back to 1955 to find a case which is considered worthy of my miserable talents, I am going to meet a very rare case, probably a case which has been published. I want to tell you what the real technique of "CPC man" is—which I do not follow. One inquires about the name of the pathologist and of the man who has made the protocol and then one tells one's helpers to go and look in the index for these names and try to find the case which fits this protocol. One looks up the case and stands there and shines. I am too old for all this, so I did not do it. I am therefore going to discuss this case as I see it.

The very first thing, I ask our honorable secretary for some information. This man has been working with benzine. Would you mind explaining what you mean by benzine? This is a word which in different countries has different meanings.

Doctor Smith: I am sorry you asked this, but I knew you would. The word in the chart is spelled benzine, so this is the way I left it in the protocol. However, none of the original house officers who took the history from this man are available to check with. This could well be spelled either way; furthermore, I understand that the more common cleaning fluid the automobile mechanics are using in this vicinity is benzol or benzene.

Doctor Snapper: We have a man of 62 years who came in with infiltration in the right middle lobe, fever, cough and blood-streaked sputum. It is quite evident that in every patient who has pneumonia which doesn't disappear one has to think of tuberculosis. On the other hand, tuberculosis of the middle lobe is known to be extremely rare. Although it's very tempting to say that since the man had an infiltration which disappeared during the time he received INH and other anti-tuberculosis drugs, this may have been tuberculosis, it is difficult for me to diagnose tuberculosis of the right middle lobe which disappears without leaving any traces. It is not my intention to diagnose this as tuberculosis.

Now this man had an aplastic kind of anemia which lasted remarkably long. On the first admission the white count was 2,300 with 26% neutrophils and 60% lymphocytes. As far as I am concerned aplastic anemia lasting this long is rarely a pure aplastic anemia. Therefore, I would like to diagnose in this case a remarkable disease of the bone marrow which at first view gives the impression of aplastic anemia but is really something else. I am somewhat impressed by the bone marrow study which showed the presence of both fibrous bone marrow and hyperplastic bone marrow. I have had bitter experiences with bone mar-

rows. Every time somebody shows me a bone marrow with the intention that I will diagnose it multiple myeloma, I know it isn't myeloma or it wouldn't have been shown to me. I ask if the bone marrow looks like multiple myeloma. How many plasma cells did this patient have? In aplastic anemia one very often sees an invasion of plasma cells in bone marrow, which may look like multiple myeloma. If fibrosis of the bone marrow doesn't sound like aplastic anemia, the absence of plasma cells also doesn't sound like aplastic anemia. I am not going to diagnose aplastic anemia.

We must then solve two problems, I think: (1) What was the original disease in this case? (2) What was his infiltration which goes like a red thread through the story, as Doctor Glasser says, and the remnants of which gave rise to a micronodular dissemination of the lungs. With your kind permission, I am going to have a look at the micronodular lesions on the chest films. We first have to discuss what is the disease from which he is suffering. I am bound as a Hollander to make one diagnosis only. Benzene or benzol, which may cause leukopenia and which was used as a drug for leukemia for a considerable time, was shown by a famous Dutch physician, Lignac (whose name you might not recognize, but who really found Fanconi's syndrome) to actually produce lymphomas. We must therefore consider that this patient may have leukemia. In this country I have seen a few watchmakers with leukemia who had cleaned the works of their watches in benzene and it was pathologically proven that they had the benzene necrosis in the spleen that one finds in benezene or benzol poisoning. In every patient with aplastic anemia one always has to think of the possibility of underlying lymphoma. With aplastic leukemia and no cause for it, one should never give up the idea the patient has lymphoma and may even have lymphatic leukemia. I am inclined to think in this direction in the present patient. We know that in lymphomas, especially Hodgkin's Disease, fibrosis of the bone marrow occurs. I should like to diagnose this long extended hypoplastic anemia as a lymphoma. If it turns out that this was leukemia, I would not feel insulted, because lymphoma and leukemia are practically the same thing. I am inclined to think of Hodgkin's Disease. If it is this, I shall explain to you why I think more of Hodgkin's Disease in this case than the other lymphomas. The man is suffering from lymphoma, leukemia or one of the other reticular cell diseases which are connected.

This group of diseases often gives rise to very open secondary infections. A large number of patients with Hodgkin's Disease die of tuberculosis. Also patients with diabetes and sarcoid have a tendency to develop a secondary infection of tuberculosis. Of course, in areas where fungus diseases are frequent, one must think more of a secondary infection with a fungus disease. As you know better than I because you are in the Middle-West, some pathologists have held for some time that Hodgkin's Disease is a manifestation of fungus disease, especially histoplasmosis. This, of course, is the same as saying that Hodgkin's Disease is a manifestation of tuberculosis because it often ends as tuberculosis or that sarcoid is a manifestation of tuberculosis because it may end with a secondary infection of tuberculosis. But the tendency for fungus disease to complicate Hodgkin's Disease is so great that even on the East Coast where fungus diseases are rare, I occasionally see a patient with Hodgkin's and torulosis, which is a rare fungus disease, but still the most frequent of all on the East Coast. Therefore, two things very much attract me in the direction that this man had a secondary infection with a fungus disease. If I look at the micronodular dissemination in the lungs which developed a few days before death then I would say it is certainly not tuberculous dissemination because the infiltrations are too large for tuberculosis. What about histoplasmosis? I would think that since this man had a positive skin reaction for histoplasmin and lives in this area, histoplasmosis is the most probable cause of his disease. You may ask about all of the negative fungus cultures. In all fairness, I must say that I have seen a patient with histoplasmosis proven at autopsy who had numerous cultures — bone marrow, peripheral blood, and lymph nodes—and none were positive. It is, of course, a pity that we have

no globulin determinations in this whole disease because if the gammaglobulin had been low, we would be much nearer to the reticulum cell system. Since the globulins are made by lymphocytes and by plasma cells any disease of the reticulum system very often may have hypogammaglobulinemia. This would explain the tendency to histoplasmosis.

Doctor Smith: We have a serum electrophoresis on his second admission. Gammaglobulin represented 34% of the total protein.

Doctor Snapper: Well, it doesn't amaze me. Hodgkin's Disease often has an increased gamma-globulin. I would think this man had a reticulo-endothelial disease and a secondary infection, which I do not think is tuberculosis, but which, since the man had a positive histoplasmin reaction, may have been histoplasmosis. Since I am a fool, I am now going to define his reticulosis. I think it is a lymphoma, probably Hodgkin's Disease. I will reserve the reason I say Hodgkins until after I hear whether it is Hodgkins. If it is not Hodgkin's I will keep silent.

Doctor Smith: Thank you very much, sir. Any questions?

Doctor Williams: Was a complement fixation test for histoplasmosis done?

Doctor Smith: I don't believe I saw one on the chart. Any other questions?

Doctor Wolf: Could I ask Doctor Snapper whether he visualizes the initial episode as histoplasmosis as well as the terminal one?

Doctor Snapper: Yes. Because, as I say, I could not place tuberculosis in this middle lobe. It ends with nodular disease disseminating. I would think it is the same disease.

A Physician: Is it possible that this is all one disease? Might histoplasmosis be responsible for his blood picture also, rather than lymphoma?

Doctor Snapper: The answer is no. If I am right, I will explain to you why.

Doctor Smith: I think I should say at this point that a correct diagnosis was never made clinically on this patient. Doctor Joel, we will now call on you for the findings in the case.

Doctor Joel: Having heard Doctor Snapner discuss the case, I ask myself whether he is the prosector and I am the clinician. I am amazed at his diagnostic acumen.

At autopsy this man was in pretty good nutritional state. He weighed approximately 185 to 195 pounds, was 72 inches long, and the exterior appearance wasn't very helpful. On opening the abdomen the peritoneum was smooth and glistening, the lymph nodes were slightly enlarged, and the liver was very large. The spleen was also large. On opening the chest there was no free fluid. The right pleural cavity was nearly obliterated by adhesions; no free fluid was seen. The left pleural cavity showed only a few adhesions. The pericardial cavity contained a few milliliters of a yellowish fluid. The pericardium was smooth and glistening. The right lung was a little heavier, congested and rubbery-like. In some areas when we cut through, it looked like a pneumonia, as you see it sometimes in cases of leukemia where you do not have the real polymorphonuclear response. The whole lung gave the impression grossly of an interstitial pneumonia. No cavities were found and no granulomas were seen grossly. This was the case in both lungs. We looked very carefully in the middle lobe and found no tuberculosis. This clears that problem up for you, Doctor Snapper.

Doctor Snapper: Small mercy — thank you sir.

Doctor Joel: Upon opening the esophagus we found a kind of membrane, slightly elevated, and made the diagnosis of moniliosis—not too astonishing in view of the massive antibiotics. The spleen weighed approximately 800 grams and the liver 2,750 grams—both really increased in size. Lymph nodes were also enlarged. The kidneys were not remarkable, showing very slight granulation, but some hemorrhages were noted. The adrenals were not too large, but showed a suggestive yellowish discoloration. The other organs in the abdomen showed no changes.

Now we come to the microscopic examina-

tion. In the liver we see changes which in some areas look like granulomata and in other areas more like necrosis. By looking more closely at the reticulum cells, we see that they are large and filled with something which look like little punctated dots. These dots are histoplasma organisms and we can make the diagnosis of histoplasmosis. They are also seen in the spleen. Nearly the same picture is seen in the lung sections. An interstitial pneumonia is present with fibrosis. The macrophages are enlarged and filled with histoplasma. Finally, on examination of the adrenals we saw, of course, histoplasma, but we also saw mycelia. Could this be from the histoplasma? We must bear in mind that we also have moniliasis. This concludes our main findings which, in each respect, show what Doctor Snapper suspected except that no lymphoma was found. This was the reason why I wondered whether he were the prosector instead of me.

In closing I should like to say that it has been a real privilege to discuss a CPC with a man of the stature of Doctor Snapper—a man who discusses so wisely and makes such a brilliant diagnosis that I was personally startled. This was the diagnosis of a great clinician. Thank you, Doctor Snapper.

Doctor Smith: We would appreciate any further remarks that you may have, Doctor Snapper.

Doctor Snapper: I honestly have very little to add to what Doctor Joel has presented. In view of the considerable amount of leukopenia, I am astonished that nothing else has been found except histoplasmosis, especially since the bone marrow biopsy indicated the presence of fibrosis, which evidently was not present at the autopsy. I therefore felt there was reason to think that the invasion of the histoplasma was favored by the presence of a reticulosis of the lymphosarcoma or Hodgkin's type, but evidently I was mistaken. Personally I have never seen a case of histoplasmosis which gave such an hematological picture for such a long time, and have never found fibrous bone marrow in histoplasmosis but have seen it very frequently in long standing Hodgkin's Disease.

Doctor Smith: Thank you very much Doctor Snapper. I know that many of you have questions, but because of the lateness of the hour, we must close. Thank you.

MEDICS IN DEFENSE



AN IMPORTANT ASSIGNMENT

Civil Defense is as essential for survival of the nation as is military defense. There is a need for clear definition of Civil Defense and an appreciation of its mission and perhaps even a new name so that it may be assigned a role in the protection of the nation equal with the Armed Forces.

The threat of nuclear warfare, with its capability of mass destruction of huge elements of our nation, has imposed on the medical and allied health professions of this country, a tremendous responsibility in the nation's effort to survive. Never before, in history, has a productive individual assumed such importance as he is expected to assume in modern warfare. The saving of lives, particularly of those who could contribute to the survival effort has become extremely important. The medical and allied professions must assume a far larger role in our war potential than ever before. We (the medics) face the greatest challenge with regard to Civil Defense.

MEDICAL CENTER

Message from the Dean

The University of Oklahoma Medical Center offers the only opportunities for advanced training in dentistry in Oklahoma, forestalling some of the loss of dental manpower that is a byproduct of the state's having no dental school. Initiated in 1923 with the establishment of an internship in dental surgery, the postgraduate program in dentistry has continued to expand as the Medical Center has grown.

Since 1953, the Division of Dental Surgery has trained two interns each year. In 1957, the oral surgery residency program was approved by the American Dental Association. In 1959, a restorative dentistry internship was started at Children's Memorial Hospital.

The American Board of Oral Surgery now requires for certification three years of approved training after completion of dental school. An important milestone was reached in June, 1960, when the first trainee completed the full three years of training at the Medical Center. He also was awarded a Master of Science degree.

Oral surgery is that part of dental practice which deals with the diagnosis and the surgical and adjunctive treatment of diseases, injuries and defects of the jaws and associated structures. An oral surgery trainee spends at least six months full time in the Department of Anesthesiology. He also covers the Mercy Hospital emergency room for additional experience with acute traumatic cases.

Oral surgery might be considered a connecting link between the physician and the dentist. As a result of the increased educational requirements, dentists are now qualified to practice oral surgery in a much wider scope than was formerly considered within the domain of dentistry. This has brought about a somewhat complex inter-relationship between medicine and dentistry, and it is only natural that the question should arise as to the status of oral surgery in relation to the practice of medicine.

The oral surgeon is a dentist and not a physician. It is not his desire to practice medicine but rather to practice intelligently a specialty of dentistry which often requires a fundamental knowledge of medical problems. In a general respect the goal of the dentist is similar to that of the physician. Both are striving to prevent disease, alleviate human suffering and prolong life.

I would like to close this message with a personal observation concerning the faculty members of the Division of Dental Surgery. Over a span of years they have kept alive a spark of dental education in this state, have given extensive professional service to patients at the teaching hospitals of the School of Medicine, and have earned our respect and admiration.

Mark R Everett

The function of the adrenal cortex supports pathogenic processes just as it does normal functions but is only rarely the primary etiologic agent.

The Role of Adrenal Cortex in the Etiology of Disease*

DWIGHT J. INGLE, Ph.D.

Dwight J. Ingle, Ph.D., received his doctorate from the University of Minnesota in 1941. He is now Professor and Chairman of the Department of Physiology at the University of Chicago.

Doctor Ingle is a member of the American Physiological Society, the American Diabetes Association, the Alpha Omega Alpha, Sigma Xi and Phi Beta Kappa. In addition, he is a Past-President of The Endocrine Society.

I AM NEITHER a physician nor a pathologist. My claim of a right to discuss the role of the adrenal glands in causing disease is that the subject interests me and I have had some success in making experimental animals sick. Our data and ideas may or may not have some bearing on diseases of man.

I shall not discuss Addison's disease, Cushing's syndrome, adrenal virilism, primary aldosteronism, and certain mixed syndromes in which, as in the others, the etiology is known to involve the adrenal cortices. I am concerned with the concept that the adrenal cortical response to non-specific stress—either an increase or an imbalance in its secretion of hormones—is a primary cause of disease.

This concept has great appeal to many physicians. The supporting evidence is impressive, but to accept it uncritically reflects the common failure of medical education to teach methods of testing claims to knowledge.

The evidence which supports an interest in this problem is as follows: *(a)* ACTH, cortisone, hydrocortisone, and a host of synthetic derivatives of hydrocortisone can suppress the symptoms of a large number of human diseases, most of which are classified as inflammatory diseases. The growth of some cancers can be retarded by these hormones. There is no satisfactory evidence that the hormones cure these diseases or that these diseases represent any form of adrenocortical insufficiency. *(b)* Removal of the adrenal glands may be followed by amelioration of diabetes, hypertension, and certain cancers in experimental animals and in patients. *(c)* Overdosing experimental animals with one or another corticoid can cause a great deal of interesting pathology, including steroid diabetes, hypertension, arteriosclerosis, gastrointestinal ulcers, nephritis, nephrosclerosis, periarteritis nodosa, etc. Resistance to infections is dramatically suppressed in animals and patients with severe hypercorticalism. *(d)* As discovered by Skelton,[1] enucleation of adrenal glands in the sensitized rat (unilateral nephrectomy, high sodium load) is followed by hypertension and renal and cardiovascular lesions. *(e)* Wexler and Miller[2] claim that small doses of ACTH cause an increase in the incidence and severity of renal-cardiovascular lesions which occur in aging breeder rats. In addition, there are a host of observations which implicate the adrenal cortices in various diseases, such as changes in the morphology and secretory activity of these glands in one disease or another or, more commonly, changes in the metabolites of adrenal steroids found in blood and urine.

What are the weaknesses of this concept for which Dr. Hans Selye[3] is the principal protagonist? First, much of the supporting evidence is derived from conditions which do not occur naturally. Also, there is lack of experimental evidence that naturally occurring, non-specific stress can cause diseases under naturally occurring conditions.

*Presented at the Third Oklahoma Colloquy on Advances in Medicine, March 24-26, 1960.

Pathogenic Effects of Steroids

Deoxycorticosterone and other sodium-retaining steroids are damaging, especially if given to an animal (usually the rat) receiving an abnormally high load of sodium chloride whose renal system is crippled by uninephrectomy. These animals may develop severe hypertension and sclerosis of vessels in the heart and kidney. Large doses of these steroids given for several weeks can cause some hypertension and some pathology to normal rats on a commercial diet which contains approximately 1 per cent salt. If the salt intake is reduced to the smallest amount needed by the animal, hypertension and renal-cardiovascular pathology do not occur. Some of the artificial steroids, such as 2 α-methyl, 9 α-chlorocortisol, have greater pathogenic potency than any of the naturally occurring hormones. Aldosterone can cause lesions in the salt-loaded animal, but it is a less effective damaging agent than was once expected.

Cortisone, hydrocortisone, and whole adrenal cortical extract are each pathogenic when given in large doses to uninephrectomized salt-loaded rat. Cortisone and hydrocortisone are comparatively weak sodium retainers. They cause only a moderate rise in blood pressure, and the renal lesions are more likely to resemble chronic nephritis than nephrosclerosis. Necrosis may occur in cardiac muscle; it is believed to be related to potassium loss. Unless animals overdosed with cortisone or hydrocortisone are treated with antibiotics, many foci of infection can be found in heart and kidney and elsewhere.

Damaging Effects of Other Hormones

ACTH—Wexler and Miller[2] have claimed that small doses of ACTH cause an increase in the incidence and severity of renal-cardiovascular lesions which occur "spontaneously" in discarded breeder female rats from the Sprague-Dawley farms. Wilgram and Ingle[4] have given small, moderate, and large doses of ACTH to similar rats with negative results. The administration of very large (16 units or more of long-acting ACTH per rat per day) doses to uninephrectomized, salt-loaded male rats does result in damage to the kidney and heart which is rather different in nature from that caused by overdosage with steroids. These animals become host to disseminated infections which are partially but not completely suppressed by treatment with antibiotics. The lesions represent inflammatory changes and foci of infection. The moderate rise in blood pressure in some of the animals overdosed with ACTH may be secondary to renal damage caused by infection.

Growth Hormone—Selye[5] has shown that the administration of hypophyseal growth hormone to uninephrectomized rats given saline to drink is followed by an increase in the incidence and severity of renal-myocardial lesions. His data show that there is an accompanying rise (more than 100 per cent) in the volume of saline which these animals drink. Is this the primary cause of the damage? We have limited experience with growth hormone given to uninephrectomized rats eating diet containing 4 per cent sodium chloride and drinking tap water.[6] The rats to which we have given growth hormone showed a 20 per cent increase in the amount of high salt diet eaten *ad libitum*, the average blood pressure was slightly higher than normal, and the increase in pathology was but little greater than in the controls. The growth hormone did accelerate the gain in weight and cause a polydipsia. Further study of the pathogenic effects of growth hormone will be required to make known the mechanisms whereby it can cause disease.

Thyroid and Parathyroid Hormones

Lehr[7] has reviewed his own evidence and that of others showing that the hormones of thyroid and parathyroid can aggravate the development of renogenic and reniprival cardiovascular diseases in the rat. Although these observations will not be discussed here, it is important to note that under certain laboratory conditions these hormones affect the development of experimentally induced diseases.

Adrenal Enucleation

In the rat the adrenal can easily be enucleated by clipping off the distal tip of the gland and popping the remaining cortex from its capsule by gentle pressure on the sides of the gland. A layer of glomerulosa cells remains attached to the capsule, and cortical tissue regenerates from this remnant. When adrenal enucleation is done in the unine-

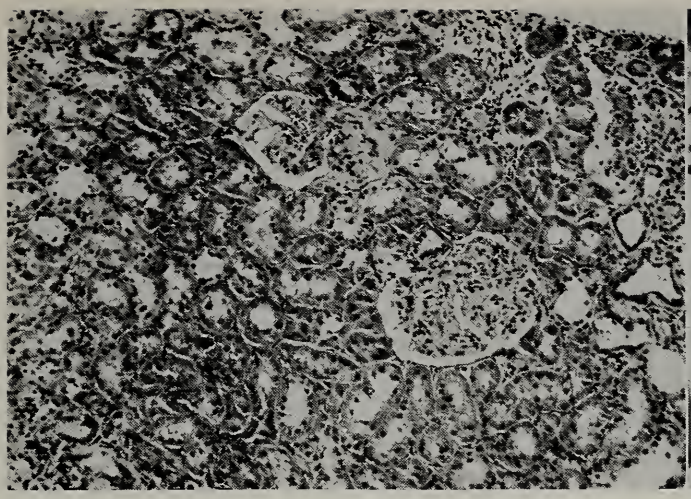


Figure 1. Low power view showing mild renal damage. There are three abnormal glomeruli. A very small area of fibrosis is present just below capsule.

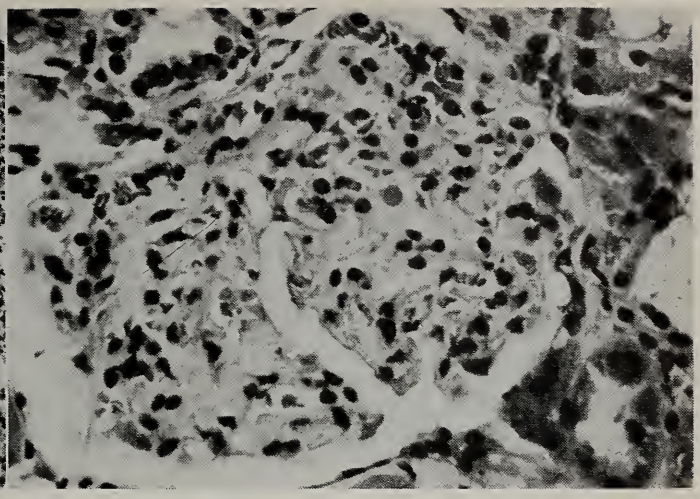


Figure 2. High power of glomerulus from figure 1. There is glomerular hypertrophy, with capsular adhesions and early thickening of intercapillary connective tissue.

phrectomized rat given a high salt load (either 1 per cent saline to drink or 4 per cent salt diet), the animal develops hypertension and renal-cardiovascular disease after three or four weeks of adrenal regeneration.[1] For unknown reasons the rats drink increased amounts of saline during regeneration of the adrenal cortices. Although an abnormally high salt load and unilateral nephrectomy are both necessary conditions, we have here a kind of hypertensive vascular disease which seems referable to something happening within the adrenal cortex itself. The following hypothesis seemed plausible. Since the remaining glomerulosa cells secrete aldosterone, a powerful sodium-retaining hormone, it was supposed that an excess of aldosterone and a subnormal amount of glucocorticoids are secreted during the regeneration of the enucleated adrenal gland. Direct studies[7] of the secretory products of the regenerating cortex have failed to show either an excess of aldosterone or an abnormal secretory pattern of steroids. It has been postulated that during the phase of cortical insufficiency which follows adrenal enucleation, the vascular tree becomes abnormally sensitive to steroids so that when secretion is renewed in the regenerating gland, the subnormal amount of steroids secreted now behaves like an excess. This is not the only interpretation that can be made of these puzzling results. We have supposed that the intact adrenal gland of the salt-loaded animal can suppress its secretion of sodium-retaining steroids to a minimum, although not to zero. The salt-loaded animal having enucleated adrenals may be less able to suppress the secretion of sodium-retaining steroids during the phase of adrenal cortical regeneration. A comparison of the secretory products of normal and regenerating adrenal glands should be made under conditions of both minimal and high salt intake.

Whatever be the cause of adrenal regeneration hypertension, it seems possible that it is due to the trouble that the animal has in excreting salt—because a high salt load and crippling of the excretory capacity by uninephrectomy are both necessary conditions.

Stressors

When uninephrectomized salt-loaded rats are exposed to cold for several weeks, they develop nephrosclerosis and hypertensive vascular disease.[9] Some animals develop cerebral hemorrhages. These dramatic changes are associated with a voluntary increase in intake of the high salt diet.[10] When the intake of the diet is restricted to that normally eaten at room temperature and the animal is allowed to drink sugar water to meet its increased need for energy, there is only a small increase in the damage to the renal-cardiovascular systems. When uninephrectomized rats are tube-fed amounts of the high salt diet comparable to those eaten *ad libitum* by cold-exposed rats, the extent of damage at room temperature is almost as

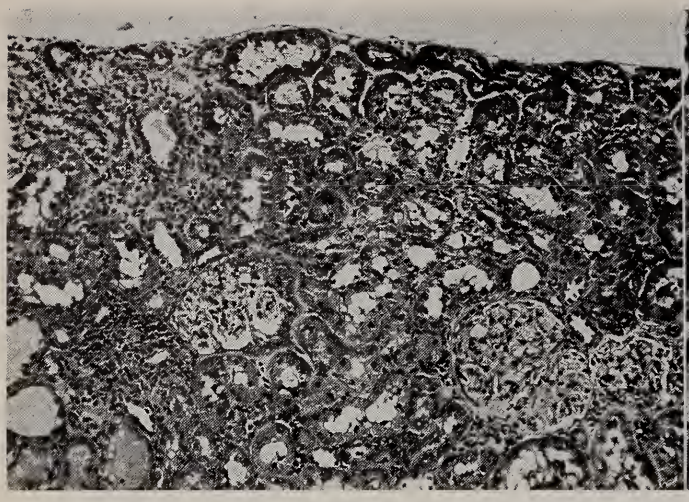


Figure 3. Low power view showing moderate renal damage. There are three abnormal glomeruli and a few dilated tubules. A small wedge-shaped area of fibrosis is present just below capsule.

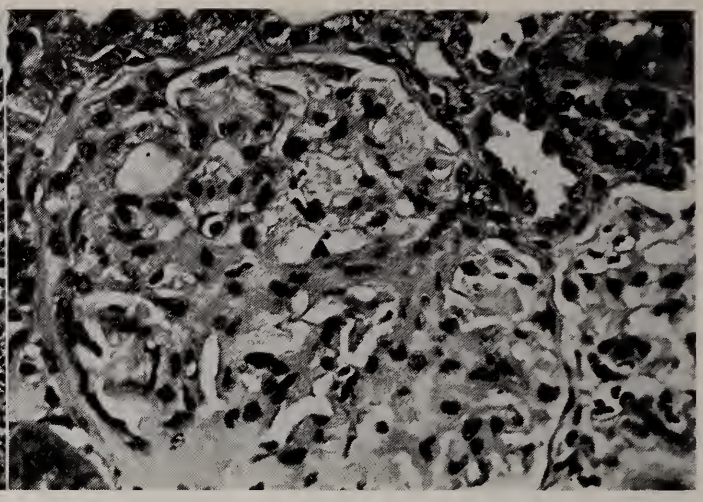


Figure 4. High power of figure 3. The damaged glomerulus shows thickening and adhesions of Bowman's Capsule, obliteration of subcapsular space and early glomerular fibrosis.

great as that occurring in the cold-exposed rats.

No other stressor has been found to cause nephrosclerosis and hypertensive vascular damage in the rat. There is a small rise in blood pressure and some increase in inflammatory changes in kidneys and hearts of uninephrectomized, salt-loaded rats subjected to laparotomy once each week, or a burn once each week, or limb ligation shock once each week for eight weeks.[11] The stress of repeated hemorrhages, fractures, neuromuscular excitation, injections of diluted formalin, and the repeated excision of skin were each ineffective.

No form of stress has been found to reproduce the "diseases" caused by corticoid overdosage in either the intact or uninephrectomized rat on a normal diet.

Salt Loading

During most of this century some clinical investigators have considered that a higher than needed dietary intake of sodium chloride plays an etiologic role in the cardiovascular diseases of man. We have confirmed the observation of Menealy[12] and Fregly[13] that high dietary loads of sodium chloride can cause severe hypertension and renal-cardiovascular damage in uninephrectomized rats and somewhat milder changes in intact rats. The genesis of pathology in the salt-loaded rat is greatly affected by adrenalectomy, as we have shown.[14] The amelioration of damage is not complete, the adrenally insufficient rat may still show some positive correlation between salt-load and blood pressure and, as will be described below, full-blown hypertensive vascular disease can be caused by salt-loading in the absence of adrenal cortical hormones; but the disease appears and progresses more slowly than in the presence of adrenal cortical hormones. By what means does adrenal cortical insufficiency protect against the pathogenic effects of salt-loading? It seems improbable that salt-loading causes an increase in the secretion of adrenal steroids. All available evidence indicates that a high salt load causes a significant suppression of the secretion of aldosterone, the most potent known sodium-retaining compound among the natural steroids. But salt-loading does not suppress the secretion of sodium-retaining steroids to zero, and the basal secretion by the adrenal cortices may have some obligatory sodium-retaining action. We have shown[14] that the untreated adrenalectomized rat drinks less water than does the non-adrenalectomized rat at a given dietary load of sodium chloride. We suppose that the adrenally insufficient animal can rid itself of sodium chloride more easily than can an animal in a state of eucorticalism and that, for this reason, the pathogenic effects of a salt load are less, but we do not know that this is true.

The salt-loaded, uninephrectomized, adrenalectomized rat is very sensitive to the administration of ACE (adrenal cortical extract).[15] Doses of ACE which are too small

to normalize all the metabolic aberrations of adrenal cortical insufficiency cause hypertension in rats fed a diet of 4 per cent salt. Here, again, we suppose that the intact adrenal glands can suppress the secretion of sodium-retaining steroids to a significant extent, but the rat given a uniform, although small amount of ACE has fixed excess of exogenous sodium-retaining hormone coexisting with a deficiency of glucocorticoids.

Production of Renal Cardiovascular Disease in Adrenalectomized Rats

Exposure to Cold—Crane, Baker, and Ingle[16] have demonstrated renal-cardiovascular pathology in adrenalectomized rats exposed to cold. All the rats were uninephrectomized and ate a 4 per cent salt diet *ad libitum*. Adrenalectomized rats were treated with maintenance doses of ACE. Groups of adrenalectomized and non-adrenalectomized rats were each subdivided into groups which were adapted to low temperature and kept at 3-5°C for 60 days; similar groups were kept at room temperature for the same period of time. When the rats were exposed to cold, the gross and microscopic damage to hearts and kidneys was equally marked in adrenalectomized and in non-adrenalectomized rats. The role of the adrenal glands in causing the pathology which occurred in the cold-exposed rats is uncertain for two reasons. Food intake was not constant. The animals exposed to cold ate more of the high salt diet than did controls at room temperature. Second, the amount of ACE (4 cc. per rat per day) used for replacement therapy was associated with some increase in renal-cardiovascular pathology when the comparison was made with non-adrenalectomized rats at room temperature.

Methylandrostenediol—Large doses of methylandrostenediol (MAD) cause severe hypertension with cardiovascular-renal damage in the salt-loaded uninephrectomized rat. Such animals develop edema when fed a 4 per cent sodium chloride diet by stomach tube, thereby indicating sodium-retaining effects of this synthetic steroid. Adrenalectomy protects the rat against the damaging effects of MAD; but when adrenalectomized, uninephrectomized, salt-loaded rats are maintained on small doses of ACE, the administration of MAD causes hypertension and renal-myocardial damage[6] quite as severe as can be produced in the presence of the adrenal glands.

Salt-loading—It was noted above that the pathogenic effects of salt-loading are much less severe in the adrenalectomized rat. Recent and current studies by Wilgram, Young, and Ingle (unpublished data) in this laboratory show that when salt-loading is continued over longer periods of time—from six months to a year—hypertension with renal-cardiovascular pathology does develop in adrenalectomized-uninephrectomized rats in the absence of hormonal therapy. Some of the changes are illustrated in figure 1.

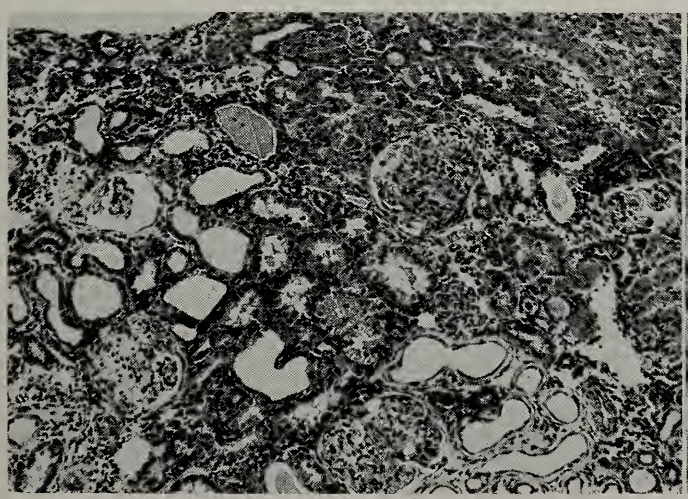


Figure 5. Low power view showing moderately severe renal damage. There is fibrosis just below capsule, with considerable tubular dilatation and cast formation, and widespread glomerular damage.

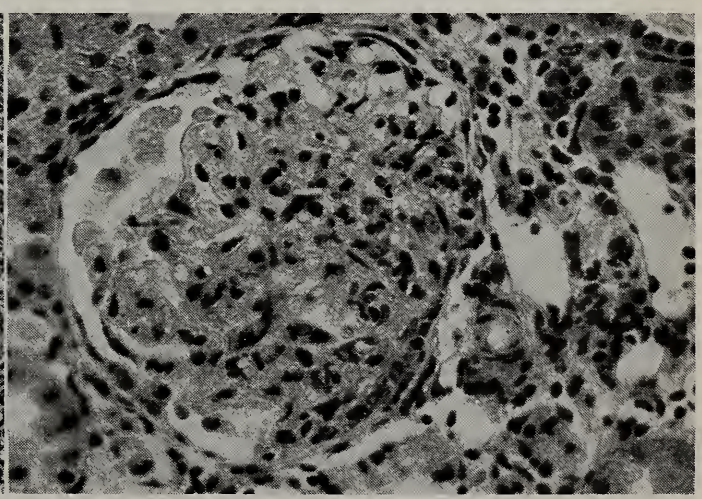


Figure 6. High power of glomerulus from figure 1. There are capsular adhesions with partial obliteration of the subcapsular space. The afferent arteriole shows a mild degree of hypertrophy.



Figure 7. Low power of heart showing edema and lymphocytic and mononuclear infiltration.

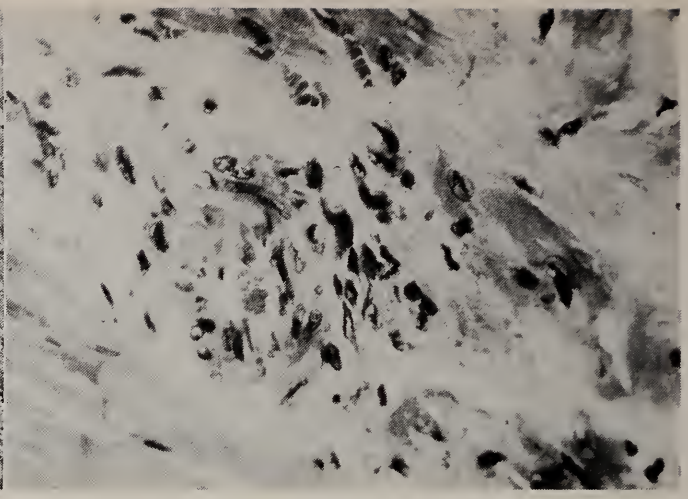


Figure 8. High power of figure 7. Mononuclear infiltration has occurred into the perivascular connective tissue of a small arteriole. Some of the cells resemble Anitchikov Myocytes.

Fregley[13] has also found salt-loading to cause hypertension in the untreated adrenalectomized rat.

Discussion

Although the hormones of the adrenal cortex can produce pathologic changes simulating human diseases when given in excess, I doubt that non-specific stressors cause either an absolute hypercorticalism or a pathogenic imbalance of hormones. There is abundant evidence that the adrenal cortical response to stress serves the cause of homeostasis. Most important is the lack of direct evidence that non-specific naturally occurring stressors can cause disease.

And then it is known that these diseases under study can be induced by experiment in the adrenalectomized animal. It is not necessary to have changes in the secretory activity of the adrenal cortices in order to produce the so-called "adaptation diseases."

We must not discount the fact that the signs of certain diseases are ameliorated by adrenal cortical insufficiency and that these diseases are more difficult to induce in the adrenally insufficient animal. The hormones of the adrenal cortex are a part of the causal pattern when they are present. I have described their role as a supporting or permissive cause rather than an active cause. In the experiments involving salt-loading, there is reason to believe that salt is the villain. Of course, there are many other means of causing diseases which do not seem to represent difficulty in handling sodium chloride. But in those experiments involving salt-loading, I am inclined to regard salt as the villain and the adrenal hormones as a conditioning factor. Professor Selye regards salt as a conditioning factor and the hormones of the adrenal cortex as primary causes of disease. I believe that the difference in point of view is real and important.

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University of Chicago, Chicago, Illinois

Steroid diabetes is ameliorated in rats subjected to the stress of Walker carcinoma, surgery, toxins, neuromuscular stress, etc. although all severe stress is thought to stimulate the adrenal cortex to greater secretory activity.

The Effect of Some Stressors on Symptoms of Cortisone Overdosage*

DWIGHT J. INGLE, Ph.D.

DAVID J. INGLE

Dwight J. Ingle, Ph.D., received his doctorate from the University of Minnesota in 1941. He is now Professor and Chairman of the Department of Physiology at the University of Chicago.

Doctor Ingle is a member of the American Physiological Society, the American Diabetes Association, the Alpha Omega Alpha, Sigma Xi and Phi Beta Kappa. In addition, he is a Past-President of The Endocrine Society.

David J. Ingle graduated from Harvard in 1955 and is now engaged in a Predoctoral Fellowship with the U.S.P.H. He is a member of Sigma Xi and a graduate student in physiology at the University of Chicago.

THE PRECISE role of adrenal cortical secretions in supporting the internal adjustments of the mammalian organism to severe stress is obscure, cloaked in generalities. What are the consequences of flooding the system with adrenal cortical hormones in response to severe stress? This question has provided ample controversy—our concept that it serves to meet an increased need for hormone, supports homeostasis, and does not represent hypercorticalism is not unopposed. But we now approach another question in the background: when an experimental animal is overdosed with adrenal steroids, does exposure to stress ameliorate the state of hypercorticalism? We have some data from studies on the rat which bear on this question but which do not permit a satisfactory answer.

Background

It seems to be generally true that the needs for adrenal cortical hormones are increased during severe stress and that this need is met by an increased secretion of hydrocortisone and/or corticosterone. We and others have puzzled about the reasons for this increased need without finding a satisfactory answer. It was once believed that these steroids are catabolized more rapidly during stress and that increased secretion is required to maintain a constant level of glucocorticoids in the fluids of the body. Actually, the titer of glucocorticoids in the body fluids rises above resting values, at least during the early stages of the response to severe stress. Although the secretion of aldosterone is affected—temporarily at least—by ACTH and some stressors, the regulation

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of the secretion of aldosterone is controlled by extra-hypophyseal mechanisms which are sensitive to other kinds of metabolic signals.

What are the consequences of adrenal cortical activation during exposure to stress? Without claiming insight into the mechanisms by which these hormones act, it seems reasonable to suppose that these are normally homeostatic. But any function is subject to disorder. The nature and frequency of "derailments" of the adrenal cortical response to stress are subjects of debate.

Adrenalectomized animals and patients given a level of substitution therapy adequate to maintain eucorticalism under non-stress conditions can usually survive mild forms of stress without the level of hormone intake being changed. This was not true in the recent past when adrenalectomized animals and patients were under-treated due to the scarcity and high cost of adrenal cortical extract and steroids. In those days a minor stress was a threat to life.

Can a state of hypercorticalism be produced by exposure to stress? We say, "Probably not." The increased amounts of steroids secreted during stress only suffice to meet the increased need for these hormones, and eucorticalism is sustained. If this be true, it then becomes reasonable to postulate the corollary concept that a state of hypercorticalism caused by a fixed level of corticoid overdosage in the non-stressed animal should be ameliorated by exposure to stress. We have attempted to test this hypothesis in the laboratory.

Requirements of the stressed rat for cortical hormones. The Ingle muscle-work test is a severe stress—the most severe in our experience. The 200 gm. male rat is anesthetized with sodium phenobarbital, the gastrocnemius muscle weighted with 100 grams and stimulated to contract five times per second. Not only does muscle work stress the animal, but the output of work is an index of how well the animal resists the stress. The intact rat can continue work for several days under these conditions, but the work output begins to fall within two hours. How much adrenal cortical extract is required to normalize the work performance of the adrenalectomized rat? As shown by Ingle and Nezamis,[1] the continuous intravenous injection of large amounts of beef adrenal extract can sustain a normal work output in adrenalectomized rats. Doses of 15 to 20 cc per 24 hours per rat was required. No single pure steroid can quite match this effect, although they will sustain work output at nearly normal levels.[2] The optimal dose of cortisone is 4 mg. per rat per 24 hours. The amounts of adrenal cortical extract or of pure steroid needed during the work test are at least 400 per cent greater than optimal normalizing doses during non-stress conditions. The point is this: The amounts of hormone required to normalize performance during the work test cause signs of hypercorticalism when given to similar animals under resting conditions.

Effect of stress on glycosuria in the partially depancreatized rat. Adrenalectomy ameliorates pancreatic diabetes, and overdosage of the mildly diabetic animal with adrenal cortex extract or glucocorticoids causes exacerbation of the glycosuria and may cause ketonuria.[3] The diabetes is also exacerbated when the adrenal cortices are stimulated by ACTH. It might also be expected that the outpouring of glucocorticoids during any non-specific stress would worsen a mild glycosuria. This is not true in the rat. We have tested cold, water intoxication, exercise, surgery, burns, fractures, ligation of limbs, hemorrhage, and dozens of toxic chemicals. A stressor may cause a temporary rise in urinary glucose due to hepatic glycogenolysis, but among those tested by us only ethylenediamine caused a sustained rise in urinary glucose. We have shown that the presence of the adrenal cortices is not required for this response to ethylenediamine.[4] Some stressors cause a mild suppression of glycosuria and others have no significant effect. There are many reports that certain stressors, such as infections, fractures, surgery, and emotional disturbances, can increase the insulin requirements of diabetic patients. Species differences in metabolic behavior are real and important.

The injection of toxic doses of 1.5 per cent solution of formaldehyde causes a decrease in the glycosuria of rats with pancreatic

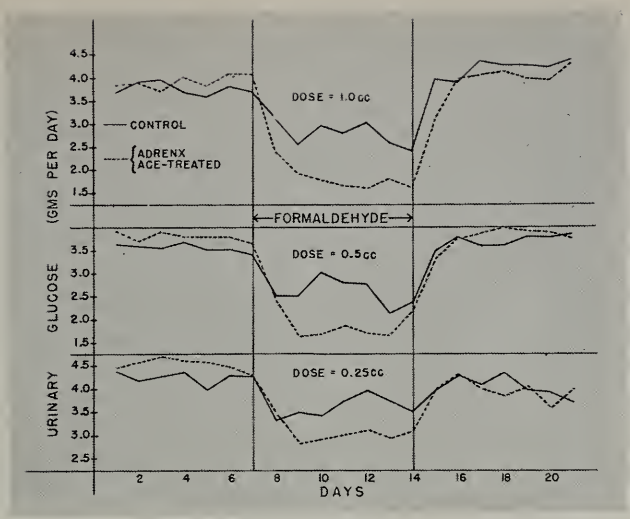


Figure 1. Effect of injections of formaldehyde on glycosuria of depancreatized rats and of depancreatized-adrenalectomized rats treated with ACE. Each average is based upon 5 rats. From Ingle and Nezamis.[5]

diabetes; the fall is greater in adrenalectomized rats.[5] These experiments were done as follows.

Partially depancreatized force-fed rats were observed until their mild glycosuria became steady. They were then adrenalectomized and each rat was treated with adrenal cortex extract in amounts required to re-establish the pre-adrenalectomy level of glycosuria. This amount ranged from 3 to 5 cc of beef adrenal extract per rat per day (1 unit per cc). The dosage required by each animal was then kept constant throughout the remainder of the experiment. These adrenalectomized rats were matched with non-adrenalectomized depancreatized rats on the basis of the level of urinary glucose. The rats were divided into three groups: the first group received 0.25 cc of 1.5 per cent solution of formaldehyde, the second 0.5 cc, and the third 1.0 cc per rat per day. Glycosuria was suppressed in all of the rats but significantly more so in the adrenalectomized rats given a constant intake of hormone (figure 1). We assume that the adrenal cortices of the non-adrenalectomized rats did respond to the stress by secreting increased amounts of steroids and that these glucocorticoids did have a positive effect upon the urinary glucose; it tended to prevent the marked decrease in glycosuria which occurred in the adrenalectomized rats. Why did the glycosuria fall in the stressed adrenalectomized rats on a constant intake of hormone? We suppose that these rats which were in a state of eucorticalism before the stress were made adrenally insufficient by the stress and behaved like adrenally insufficient rats in respect to the amelioration of glycosuria.

Recent and Current Studies

From this background of experience with the effects of stress upon experimental diabetes in the rat, it would be logical to test the effects of stress upon steroid diabetes. However, we arrived at our current program of study by an indirect route. One of us (David Ingle) independently set about to study the effects of diabetogenic dosage of cortisone acetate upon the growth of Walker Carcinoma 256, beginning treatment with steroid on the day the tumor was implanted.[6] Male Sprague-Dawley rats of about 300 gms. tube-fed a medium carbohydrate diet were used in these studies. When treatment is delayed until this highly malignant tumor is well established, the rate of its growth is retarded only a little by large doses of cortisone. When treatment with cortisone is started either before the tumor is implanted or on the day of implantation, the growth of the tumor is markedly suppressed, as shown in figures 2, 3, and 4. More interesting and dramatic is the suppression of urinary glucose by the tumor. These data are included in the figures.

Among subsequent experiments, the following important observations are established. The longer the tumor grows, the more resistant the rat becomes to the diabetogenicity of cortisone. When the tumor is allowed to grow for as long as 12 days before treatment with cortisone acetate is started, glycosuria does not appear at all, and it cannot be made to appear by giving larger amounts of cortisone acetate up to 45 mg. per rat per day. Such doses are highly toxic to normal rats but can be tolerated by tumor hosts.

Why should the tumor suppress this one symptom of hypercorticalism? We can only guess. None of our hypotheses seems to fit all the facts. The adrenal cortices of the tumor host hypertrophy several-fold. If the

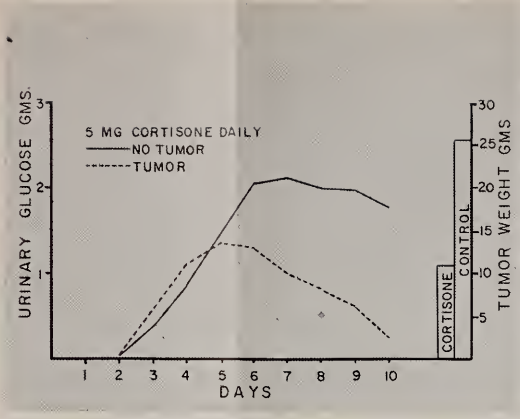


Figure 2. Effect of Walker Carcinoma 256 on glycosuria induced by cortisone in the force-fed rat. Six rats per group. Based on data published by David J. Ingle.[6]

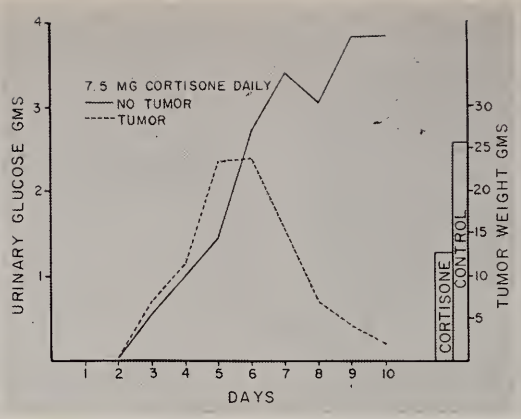


Figure 3. Effect of Walker Carcinoma 256 on glycosuria induced by cortisone in the force-fed rat. Six rats per group. Based on data published by David J. Ingle.[6]

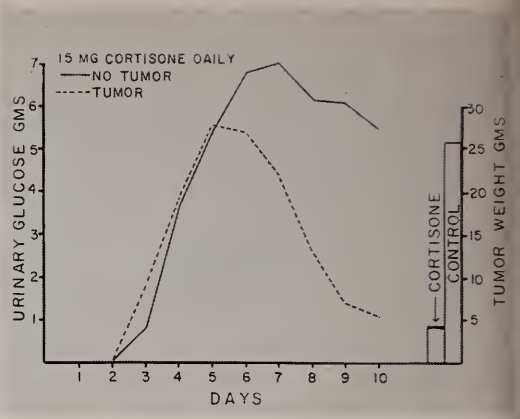


Figure 4. Effect of Walker Carcinoma 256 glycosuria induced by cortisone in the force-fed rat. Six rats without tumor; 5 rats with tumor. Based on data published by David J. Ingle.[6]

secretory activity of these glands is similarly increased, it might be expected to cause symptoms of hypercorticalism, but we have just seen that the tumor suppresses one symptom of hypercorticalism. Does the tumor burn up the extra glucose? Does the tumor take up the protein which would otherwise be used for extra gluconeogenesis in liver? Does the tumor destroy cortisone? Tumors in rats with maximum suppression of glycosuria have an average weight of less than 5 gms. (figure 4) and are almost completely necrotic. Surely the metabolic changes resulting in the disappearance of 5 gms. or more of urinary glucose daily do not occur within the tumor itself but must represent an effect of the tumor upon the metabolism of the host. Perhaps the tumor is highly toxic to the rat and increases its need for corticoids beyond the ability of its own adrenals to secrete them—and the tumor host can tolerate even large amounts of exogenous hormone because of extra "need." We know from other studies on adrenalectomized rats that they tolerate the Walker Carcinoma rather well when maintained on saline without hormonal therapy. This does not support the idea that the tumor is a severe stressor. Cortisone is not biologically inactive in the tumor host. It does suppress the hypertrophy of the adrenal cortices and even causes partial but not complete atrophy of the cortices. Spleen and lymph nodes which are markedly enlarged in the untreated tumor hosts are suppressed but not completely atrophic in the steroid-treated tumor host.

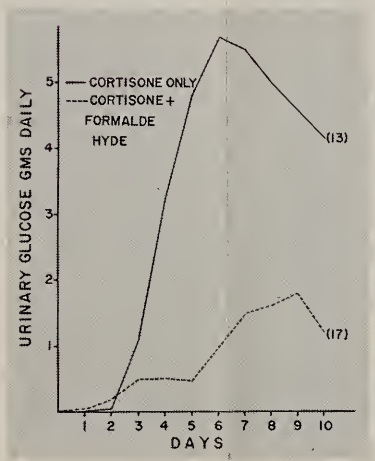


Figure 5.

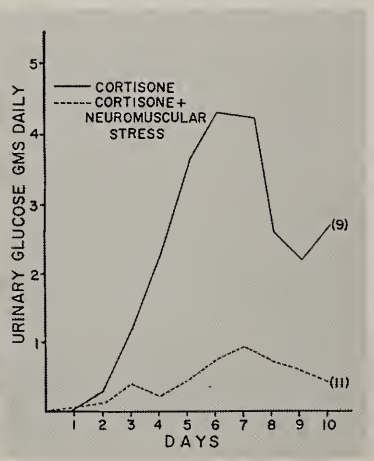


Figure 6.

Figure 5. Effect of 0.5 cc of 1.5 per cent formaldehyde on glycosuria induced by 10 mg. of cortisone acetate daily in the force-fed rat. Data published by David J. Ingle.[7]

Figure 6. Effect of neuromuscular stress on glycosuria induced by 12.5 mg. of cortisone acetate daily in the force-fed rat. Data published by David J. Ingle.[7]

The next series of studies[7] tested the possibility that other stressors would suppress glycosuria in the rat overdosed with cortisone acetate. The effect of excising skin on steroid diabetes has been published.[6] Similarly, the injection of dilute solutions of formaldehyde suppresses glycosuria, and neuromuscular stress does so almost as dramatically as does the Walker Carcinoma (figures 5 and 6).

Discussion

Glycosuria is a secondary expression of hypercorticalism. The fact that some stressors suppress steroid diabetes does not mean

that other signs of hypercorticalism can be suppressed by stress, yet the possibility that this is so seems important. We are presently engaged in studies of other signs of hypercorticalism. David Ingle is testing the effect of stressors upon the antiphlogistic effect of cortisone. Exposure to stress does not block this effect of cortisone, possibly because the stressors thus far tested have an extra-adrenal effect on inflammation like that of cortisone itself.

The senior author, having a greater subjective interest in the aging of the kidneys and the arterial tree, is studying the effects of repeated fractures upon the pathogenic effects of cortisone in the uninephrectomized, salt-loaded rat. Cortisone acetate alone but not fractures alone causes a moderate hypertension and damage to the heart and kidney. Stress does not prevent the pathogenic effects of cortisone overdosage, but the possibility that stress lessens the rise in blood pressure has not been excluded. These studies should be extended to adrenalectomized animals and to animals given deoxycorticosterone, a steroid having pathogenic potency much greater than that of cortisone. Hall[8] has reported that the stress of severe, repeated faradic stimulation aggravates the pathogenic effects of deoxycorticosterone in the rat. Other stressors and other symptoms of hypercorticalism must be tested before we can answer the question implied in the title of this paper.

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ABSTRACTS

Production of $C^{14}O_2$ from 1- and 2-C^{14}-Acetate by Human Subjects in Various Metabolic States

WALTON W. SHREEVE,* ALLEN R. HENNES** and ROBERT SCHWARTZ***

Metabolism, 8: 741-756, 1959

The rate of appearance of $C^{14}O_2$ in the breath of human subjects under diverse metabolic conditions has been determined after the single intravenous injection of 1- or 2-C^{14} acetate (40 to 200 microcuries in .75 mM). Three patients with pulmonary carcinoma and four patients with diabetes were employed in 13 individual studies.

Patients in general excreted about 60 to 70 per cent of the C^{14} from 1-C^{14}-acetate as $C^{14}O_2$ within the first 24 hours, and about 55 per cent from 2-C^{14}-acetate. $C^{14}O_2$ from 1-C^{14} acetate was excreted with an earlier and twofold higher peak activity, a steeper decline of activity from 2 to 8 hours after injection and at somewhat more rapid cumulative rate than from 2-C^{14}-acetate.

Stable, elderly diabetics (without insulin but normoglycemic) showed no difference from nondiabetic (carcinomatous) subjects in excretion of $C^{14}O_2$ from 1-C^{14}-acetate. In the stable diabetics, fasting for 40 hours, which produced mild ketosis, did not noticeably change 1-C^{14}-acetate oxidation. In stable, juvenile and lipoatrophic diabetics, $C^{14}O_2$ excretion after 2-C^{14}-acetate was apparently identical.

In paired experiments in the same individual with and without prior acute dosage with prednisone, there was in each case (three studies with 1-C^{14}-acetate, one with 2-C^{14}-acetate) a significant decrease averaging 10 to 20 per cent in $C^{14}O_2$ excretion.

In one patient analyses of peripheral venous and arterial $C^{14}O_2$ at the same time as breath $C^{14}O_2$ during the first 40 minutes after injection of 2-C^{14}-acetate showed that, while arterial and respiratory $C^{14}O_2$ were essentially parallel, the specific activity of peripheral venous $C^{14}O_2$ rose much more slowly.

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The Role of Bile in Gastric Inhibition By Fat in the Small Bowel

RENE MENGUY*

Surgical Forum, X: 164-167, 1960

Gastric secretion and motility of the intact rat are inhibited when fat is present in the proximal small bowel. This inhibitory action is absent when bile has been previously diverted from the small intestine. Under the latter conditions, the addition of bile salts to the administered fat results in the same inhibition as in the intact animal. Since parenterally administered bile salts have been shown to inhibit gastric secretion and motility in the rat, these data suggest that, in this animal at least, gastric inhibition by fat may be due in part to an increased reabsorption of bile salts incident to their emulsion with neutral fat.

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Humoral Effects of Experimental Crush Syndrome

DAVID D. SNYDER* and GILBERT S. CAMPBELL**

Surgery, 47: 217-223, 1960

The humoral aspects of experimental crush syndrome were studied by cross-circulating intact, aciduric dogs with ischemic hindlimbs of other dogs. Plasma and urinary myoglobin and hemoglobin values, plasma potassium and phosphorus levels, and glomerular filtration rate and effective renal blood flow were determined. Following cross-circulation, 5 of 16 dogs died with hypotension and hyperkalemia and the kidneys of these dogs showed hydropic tubular degeneration and numerous protein casts. The 11 surviving dogs exhibited a transient impairment of glomerular filtration rate and effective renal blood flow which returned to normal within two weeks.

*Resident in Surgery.
**Professor of Surgery.

Effects of Restraint Stress on Gastric Secretion in the Rat

RENE MENGUY*

The American Journal of Digestive Diseases 5: 911-916, 1960

When rats were stressed by restraint in a wire jacket for 20 hours, hemorrhagic gastric erosions consistently developed in the glandular mucosa. Previously vagotomized rats were partially protected from stress ulcers, whereas hypophysectomy or adrenalectomy were without effect. Measurement of 6-hour gastric secretory output in rats submitted to the same restraint stress revealed a 94 per cent inhibition of gastric secretory activity in comparison with unstressed controls.

*Assistant Professor of Surgery.

FACULTY NEWS

Paul W. Smith, Ph.D. Accepts New Post

Paul W. Smith, Ph.D., has resigned from his full-time position on the staff of the Department of Pharmacology of the School of Medicine to accept an appointment as Chief of the Section on Biophysics of the Civil Aeromedical Research Institute of the Federal Aviation Agency. He will retain an active affiliation with the Medical School as Professor of Research Pharmacology.



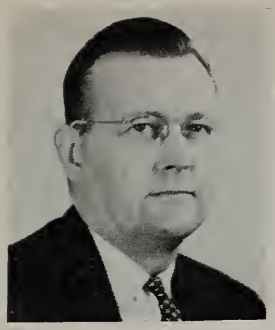
Doctor Smith came to the University of Oklahoma in 1941 as Assistant Professor of Pharmacology after having taught at the Universities of Tennessee and Illinois. He became an Associate Professor in 1945 and Professor in 1950, and served as Chairman of the Department from 1958 until January 1, 1961.

At the Civil Aeromedical Research Institute he will assist in the development of instrumentation for remote monitoring of physiologic functions by telemetry, as a part of a program designed to test physical fitness and performance characteristics in human subjects under actual working conditions. He will also continue his current researches on the effects of steroid hormones and the digitalis glycosides on the chemical constituency and work capacity of the heart.

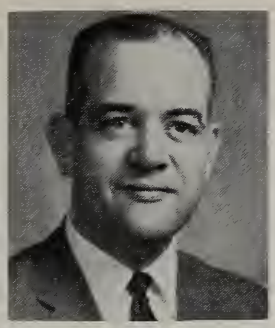
Two Professors Join Biostatistical Unit

Two statistics experts from the Norman campus of the University of Oklahoma, instrumental in development of the Medical Center's Biostatistical Unit, have been appointed to part-time posts at the School of Medicine.

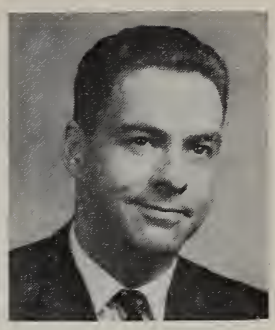
John Clark Brixey, Ph.D., O.U. professor of mathematics, was made consultant professor of mathematical statistics, and William Viavant, Ph.D., associate professor of computer science at Norman, now holds the medical school title of consultant associate professor of computer science.



HAIN



GOLDBERG



MUMMERY

Ten Appointees Added To Medical Center Staff

Raymond F. Hain, M.D., neuropathologist who recently moved to Oklahoma City from Seattle, Washington, is among new appointees to the part-time teaching staff of the University of Oklahoma School of Medicine. He was named associate professor of pathology.

Doctor Hain was certified in pathologic anatomy in 1951 and in neuropathology in 1956. A graduate of Jefferson Medical College, Philadelphia, he interned there and trained as a pathology resident and fellow at Providence Hospital and the University of Washington in Seattle and at Washington University, St. Louis. He took work in neuropathology at Montreal Neurological Institute, McGill University, Montreal, in 1950-51, then returned to the University of Washington School of Medicine, where he taught until coming here.

Three faculty newcomers are members of the Oklahoma City VA Hospital staff. They are: Ira Goldberg, Ph.D., and William James Mummery, Ph.D., instructors in medical psychology, and Carmen Eddythe Bloedow, M.D., clinical assistant in medicine. Both Doctor Goldberg, full-time VA research psychologist, and Doctor Mummery, staff psychologist in the Mental Hygiene Clinic, received their Ph.D. degrees from the University of Oklahoma last year. Doctor Bloedow, a graduate of Ohio State Medical School, has just completed a three-year residency at the O.U. Medical Center.

Among other appointments:

Joe E. Collins, M.D. (O.U., 1948), instructor in urology. Doctor Collins, who took his residency training at the Medical Center, returned here after practicing in Joplin, Missouri, the past three years.

Adrian A. Kyriakopoulos, M.D., (University of Athens, 1957), a research fellow in the O.U. Department of Medicine since 1956, named clinical assistant in medicine.

William Robert Collins, M.D., and Lindberg J. Rahhal, M.D., both 1953 graduates of the O.U. School of Medicine, appointed clinical assistant in ophthalmology and radiology, respectively.

Larson Russell Keso, D.D.S., M.S., (Washington University), named clinical assistant in orthodontics, Division of Dental Surgery. Charles Lee Reynolds, M.D., (Southwestern Medical School, 1949), clinical assistant in urology. Doctor Reynolds finished residencies at Southwestern last year.

Special Article

Experimental Studies on the Functional Capacities of Middle-Aged and Aging Persons

This study on functional and metabolic reserves is a part of the research program being conducted by the Civil Aeromedical Research Institute ("CARI") of the Federal Aviation Agency, presently located on the North Campus, University of Oklahoma.

BRUNO BALKE, M.D.

Bruno Balke, M.D., graduated from the University of Berlin in 1936. From 1950 to 1960, he was with the USAF School of Aviation Medicine at Randolph A.F.B. At the present time, he is engaged in research at the Civil Aeromedical Research Institute of the Federal Aviation Agency and is Research Professor of Physiology at the University of Oklahoma School of Medicine.

Doctor Balke is a member of the American Physiological Society, the Society of Experimental Medicine and Biology, the Aerospace Medical Association and the American College of Sports Medicine.

AT THE National Conference on the Medical Aspects of Sports, preceding the AMA Clinical Meeting in Dallas in 1959, I presented experimental evidence that the physical fitness status of our adult male population, on the average, is poor or, at least, below the level to be desired. More than 50 per cent of the American male population are lacking the functional and metabolic reserves to survive emergency situations such as were readily tolerated and overcome by the pioneering ancestors of a period not too many years in the past.

Such a statement, of course, was never expected to remain unchallenged and I was not surprised to learn about another "experiment": "Here"—I read in a letter from Keller, Texas—"we have done considerable research with ten pioneer men who crawled out of the hills the other side of Wautauga. We found that they couldn't survive Fort Worth freeway traffic overnight. Eight were struck down within the first hour, one was committed to the mental hospital at Wichita Falls, and the last was seen heading west, rapidly, in front of a 14-wheeler."

This story was told and signed by two educators. I saw no need for a reply because nobody is going to urge a backward development. All I wanted to emphasize was the rapidity with which vigor and vitality of a relatively young nation could become endangered by the modern life if its biologic consequences were sneaking up on us.

With all the emphasis on science and technique, and with the generally increasing contempt for physical activity, the natural instinct for physical play, apparently, is dwindling. The consequences of such attitude are not well understood and the final evolution of man, during the course of a peaceful and long-lasting overcivilization, is a matter of speculation. If all physical strain would be removed in the future: would mankind profit from saving energy? What would happen to physical and mental health and to the vitality of the Nation?

There is some experimental evidence that a relatively short period of complete rest and relaxation can have a dramatically detrimental effect on the capacity for compensatory regulations of the cardiorespiratory and metabolic systems. After a few weeks of voluntary bed-rest or after a few days of inactive floating in water the experimental subjects revealed all biologic signs of severe chronic fatigue.

The findings of Doctor J. Naughton, at the V. A. Hospital in Oklahoma City, that the work capacity of a great many doctors was not much superior to that of a certain group of bed-patients may indicate that a great number of professional medical people is not completely aware of the physiologic consequences resulting from lack of physical activity. That does not come as a great surprise since the philosophic concept that the wear and tear of daily life results in premature degeneration is preferred by many people to the theory that a structural involution follows diminution or cessation of functional work. Personally, I also would prefer the first theory—if the experimental evidence and the life experiences would not speak loudly for the latter concept.

Medical education emphasizes, as a necessary background for the prevention, treatment, and alleviation of diseases, the pathologic aspects of life. With proper methods and techniques it is possible to draw the dividing line between "normal" health and beginning disease. Usually, all further medical interest is then focused on the latter.

But isn't there sometimes a need to know more about how "normally healthy" a man might be? Isn't it sometimes of importance to know just how much an individual can be burdened by daily work loads to perform optimally for a long period of time?

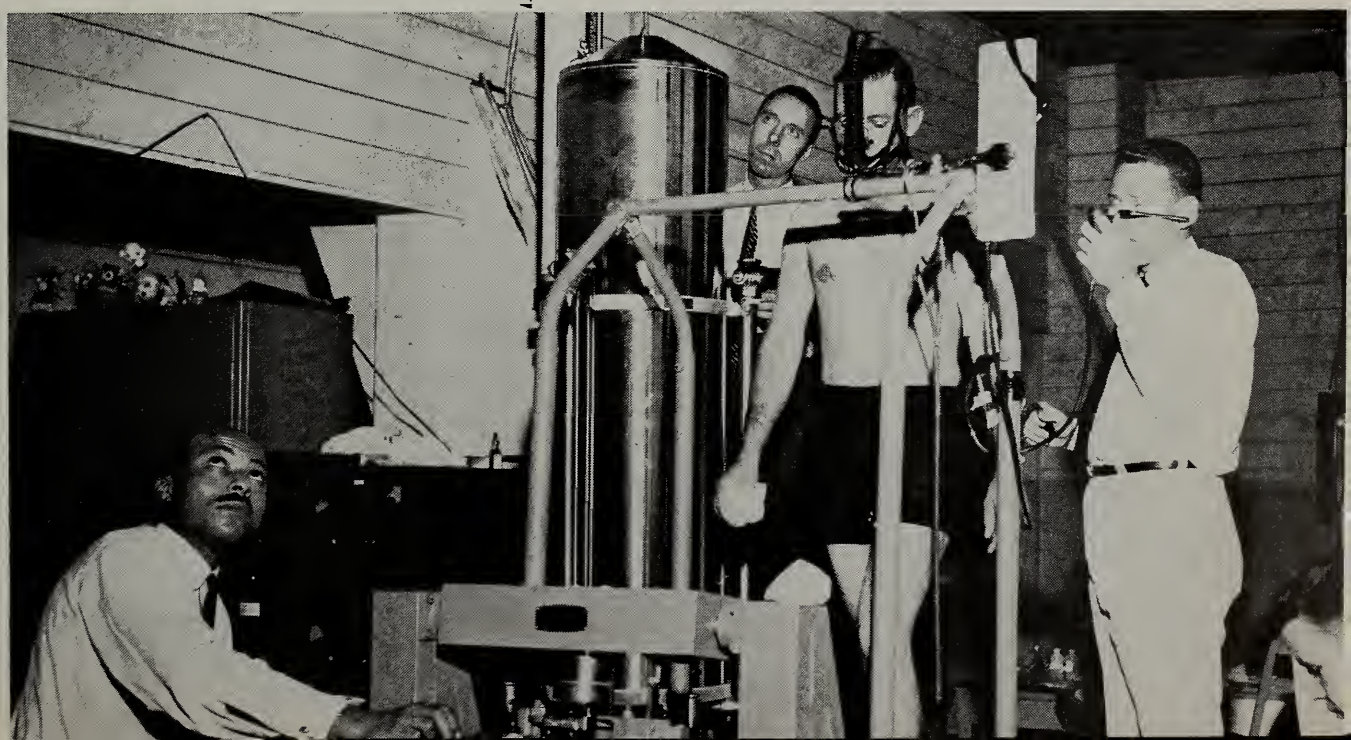
Undoubtedly, each individual, at a given time, has a certain biodynamic potential. This potential depends on the proper adaptive coordination of all automatic and systemic organic functions. The most important — because truly life-sustaining — functions are those concerned with supplying oxygen to the living cell. If oxygen supply becomes locally insufficient in less vital areas, there might just be local fatigue and, perhaps, local cessation of any further function. The damage might be reversible or not, depending upon duration of anoxia. But if a vital organ is hit by severe hypoxia, life itself dwindles like a candle under glass and within a very short period of critical anoxia it ceases completely.

The medical reader is asked to forgive this short dwelling on well understood principles. These platitudes were only meant to help to explain the performance physiologist's attitude of evaluating man's functional adaptive capacity, first of all by determining the potential range of circulatory and respiratory adjustments.

In a second thought he is concerned about the metabolic processes and the complex interplay of all functions for the attainment of the maximally possible energy expenditure. The latter, also called the "vita maxima," or the "aerobic crestload" is a fair indication of any man's functional re-

The motor-driven treadmill is designed to provide variable work intensity by changing speed or elevating grade. Standards of endurance are created here which may be applied to any job condition.

John Naughton, M.D., of Oklahoma City's Veterans Administration Hospital, is shown monitoring subject's pulse rate and blood pressure, while other investigators coordinate the treadmill controls and operate the spirometer.





The author is equipped with transmission devices which send telemetered physiologic signals to the receiving station while subject exercises. Present receiving equipment will permit monitoring of four men simultaneously.

serves and can be used to define, quite precisely, the optimum or maximum load level for daily work.

There is no short-cut for determining the biodynamic potential. No "static" or resting measurements and no measurements following a given exercise or other stressing procedure will turn the trick to furnish a reliable criterion of functional adaptive capacities. However unfortunate, only adequate stresses—and the best stress is physical exercise of gradually increased intensity —are useful for obtaining the data desired. Although there are almost as many testing procedures of working capacity as there are investigators in this field, the test described in the following is probably one of the most informative and most adaptive procedure in existence.

In CARI's laboratory a motor-driven treadmill is used as the instrument of choice for the assessment of the highest metabolic rate an individual can successfully and adequately cope with. For "normal" male subjects the walking speed is set to 3.4 m.p.h. Gradually, from minute to minute, the treadmill is tilted in its inclination, forcing the individual to walk at steeper and steeper grades uphill. The increments in grade are of consistent magnitude and the work intensity, thus, increases linearly. As a result, the subject's energy expenditure follows the demands. That means a stepped-up blood flow and an adaptation of pulmonary ventilation to the intensified requirements of gas exchange.

In order to monitor the test and to be able to determine at any moment the test subject's physiologic reactions to the imposed stress, measurements of pulse rate, blood pressure, respiratory rate and tidal volume are taken periodically at short intervals. More modern techniques, at the present in the state of development, may at a later date allow for remote monitoring of these and other essential physiologic functions by telemetry.

The testing procedure makes it possible to keep the imposed stress within any individual's physiologic limits and to determine his metabolic crest load. The latter is not only a yardstick of "physical fitness" in general but allows also for an estimation of the maximum energy demands which can be met during the routine work of everyday's life.

In experiments with several hundreds of men, in the age range from 17 to 65 years, a wide scale of physical performance capacity was established. The lowest point on this scale represented the average results from a group of hospital patients with chronic pulmonary disease.* These people were only able to raise their maximum energy expenditures to a level of six times the basal metabolic rate. A ten-fold increase was observed as the average of the entire male test population but athletes trained for sustained high energy output reached maxima equivalent to sixteen times the resting metabolism.

Several small groups were tested before, during and after various periods of increased physical activity. Middle-aged men with sedentary living habits improved their functional capacities by 25 per cent as the result of a ten-week course of daily "workouts," each of 30 to 40 minutes duration and consisting of the simplest, cheapest and most effective form of exercise: alternatingly

*Experiments accomplished in the V. A. Hospital, Oklahoma City, by Doctor John Naughton.

trotting and walking. This improvement was caused by an intensified vagal tonus with a reduction of pulse rate for any given work intensity, by an apparently increased stroke volume of the heart, by an augmented capacity for maximum oxygen intake, and by an increase of the maximum breathing capacity during work.

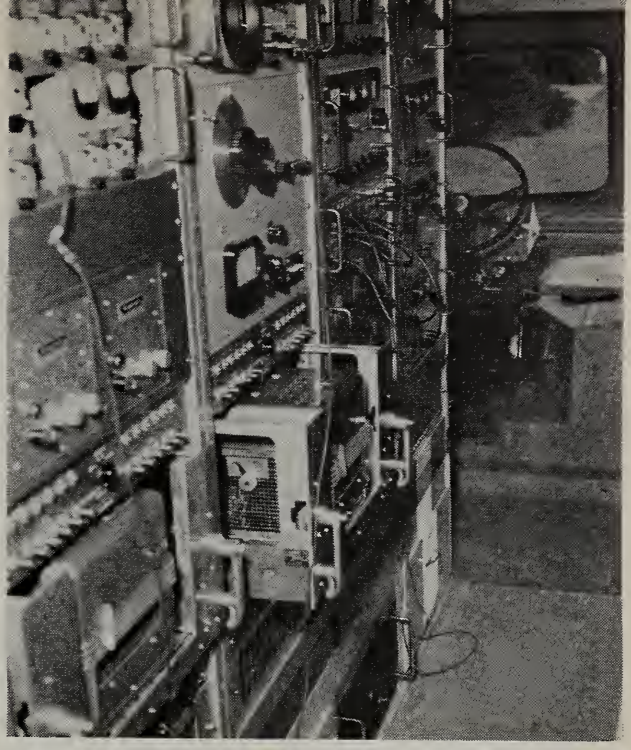
The biochemical co-investigator in these studies, Doctor James Green, found significant changes in the carbohydrate, fat and protein metabolism as a consequence of the physical training period, changes suggesting a better utilization of energy stores. During submaximal work of two hours duration the blood sugar level of the trained men remained fairly constant while it dropped significantly in the less trained men during the second hour of exercise.

The serum cholesterol level, on the other hand climbed higher, during work, in the well trained who apparently mobilized greater amounts of lipids and also utilized them: physical training was accompanied by a 10 to 20 per cent fall of the resting serum cholesterol levels.

A question of great interest has always been what fraction of the functional and metabolic potential could be considered a "safe" load for daily work. Treadmill experiments have shown that well-trained subjects tolerated a "50 per cent load" occasionally for 10 to 12 hours, and a "33 per cent load" for 8 to 10 hours on several consecutive days.

Untrained individuals, on the other hand, had to discontinue their "33 per cent load" —which was less than that of the former— after 3-4 hours because of "exhaustion." It appears quite realistic to consider a "20 to 25 per cent load" during a 6-8 hour on-the-job period as the safe margin for the daily work of "normal" individuals.

Another fact, brought out by these investigations, was that physical working capacity was by no means related to the process of growing older in years: professors surpassed young students, staff officers outperformed young basic trainees, etc. It all seemed to depend upon the regular activity level people usually were engaged in. Chronologic and physiologic age are not, by necessity, progressing parallel. And the best thing that can be said is: no time appears to be too late to improve on existing "poor" physical condition. There was even some evidence that certain findings usually considered as symptoms of aging—such as hypertension, angiospasm, undesired fat deposition, etc.—were alleviated after the individual had taken up and followed a regular program of intensified daily caloric expenditures.



Pictured above is the truck-mounted receiving station for broadcasted physiologic signals, such as pulse rate, blood pressure, respiratory rate, body temperature and EEG.

More longitudinal studies on individuals throughout their life will give us the scientific information at what age certain physiologic capacities will begin to deteriorate. For many singular biologic parameters such knowledge may exist. The appearance time of the final downward sloping of the biodynamic potential, however, is not truly known yet. It must *not* occur during the "forties" and early "fifties." And even if it occurs afterwards there remains the question then if the "slowly deteriorating old man," physiologically seen, might not be younger still than his junior in years.

Using such procedures as described, and accompanying biochemical methods, as tools, the studies on the biodynamic potential might shed some light on the problems of aging.

PRESIDENT'S LETTER



Senate Bill No. 81 has been filed by State Senator Charles Wilson of Sayre, Oklahoma, and is now in committee. This Bill has come to be known as the Medical Examiner Bill. It would create a Board with authority to employ a State Medical Examiner and other personnel to investigate deaths due to questionable circumstances. The Bill spells out the authority for Court order of an autopsy in specific cases where permission cannot be obtained from the next-of-kin. The lack of such provisions in our present statutes has put physicians, and in particular pathologists, in an awkward position from time to time when asked or ordered by the Court to perform an autopsy to determine cause of death. It has turned out that the doctor performing the autopsy is not always in the clear from a legal standpoint even when doing so on Court order. In the most famous Oklahoma case of this general category to date, the Nanny Doss case in Tulsa, Leo Lowbeer, M.D., the pathologist at Hillcrest Medical Center, cannily took the additional precaution of obtaining a permit from Mrs. Doss before performing an autopsy on her deceased husband. Doctor Lowbeer suspected the deceased of having been poisoned by arsenic, and he later proved this true to the satisfaction of the Court. However, we all know such permission is oft times nigh to impossible to obtain. The Legislative Committee of the Oklahoma State Medical Association recommends strongly all support possible be given this Senate Bill No. 81 by doctors throughout the State.

Another bill in which the Legislative Committee has expressed interest and which concerns all physicians is a proposed "Good Samaritan" law, which protects physicians who render emergency care at the scene of an emergency, in good faith, relieving them of liability for civil damages "as a result of any acts or omissions" in rendering such care. Little or no progress has been made on this proposed bill to date because it has not been written up in acceptable statute form. Similar bills have actually been adopted in California and South Dakota. But since bills of a like nature were introduced and defeated last year in the States of Mississippi, New York and Virginia, particular care must be used to get the wording correctly legalistic.

Satisfactory liaison is being maintained with the Legislature. The Oklahoma County Medical Society has again made a great contribution to good relationships by furnishing a list of physicians who have volunteered their services to be on call for any emergency needs at the Capitol during this session. This list was duly transmitted to both the House and the Senate and gracious acknowledgement received from both groups by the undersigned.

Walter E. Brown, M.D.

WALTER E. BROWN, M.D.
President



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In the control of diarrhea, Lomotil offers safety, efficacy and greater convenience.

DOSAGE: The recommended initial dosage for adults is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is under control. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. ($\frac{1}{2400}$ grain) of atropine sulfate to discourage deliberate overdosage.

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Kennedy Introduces Health Plan for Aged

The nation will be hearing a lot about H.R. 4222 and S. 909 in the months to come.

President Kennedy asked Congress on February 9th for a vast, expensive health program, highlighted by a compulsory social security program for financing hospital care, nursing care and out-patient diagnostic services.

In a special message to Congress, the President also proposed federal scholarships for physicians and dentists, grants to bolster community nursing and hospital services, aid to medical and dental schools, a program to improve the health of children and youth, and increased medical research. But the spotlight of his interest was unquestionably focused on the aged care proposal.

The controversial amendment to the Social Security Law, entitled the Health Insurance Benefits Act of 1961, is slated to become one of the hottest domestic issues facing Congress. Last August, a similar amendment narrowly missed passage.

Mills Says No

Pointing up the stiff fight in prospect was the refusal of Chairman Wilbur Mills (D., Ark.) of the House Ways and Means Committee to introduce the new legislation. The Administration was finally forced to pick for its champion Representative Cecil King (D., Calif.), second ranking Democrat on the key committee, who introduced the measure on February 13th as H.R. 4222.

In the Senate, the proposal has been introduced by Clinton P. Anderson (D., N.M.), second ranking Democrat on the Senate Finance Committee and sponsor of last August's efforts to establish a health plan through the social security mechanism. The Senate has tagged the bill S. 909.

Provisions of the Bill

The proposal would amend the Social Security Law by adding a new title (XVI) under which in-patient hospital services, skilled nursing home services, home health services and out-patient hospital diagnostic services would be provided to any individual over age 65 who is entitled to monthly insurance benefits under the Social Security Law or the Railroad Retirement Act, whether or not he has elected to receive such monthly benefits.

Payment would be provided for the following services:

- *Up to 90 days of in-patient hospitalization in semiprivate accommodations, subject to a deductible of $10 for each of the first nine days, with a minimum deduction of $20 (beginning October, 1962).*
- *Up to 180 days of skilled nursing home services (beginning July, 1963).*
- *Home health services up to a maximum of 240 visits during a calendar year (beginning October, 1962).*
- *Out-patient hospital diagnostic services, subject to a deductible of $20 for each complete study (beginning October, 1962).*

"Units of Service" Formula

A "unit of service" formula would be applied to determine the combination of hos-

pital and nursing home days available. One day of hospital care would be equivalent to two days (units) in a nursing home and the maximum number of units authorized for a "benefit period" would be 150. Thus, a patient who used 90 days of hospital care would only be eligible for 120 days in a nursing home following his hospitalization.

The "benefit period" would correspond to the length of an illness, with the time measured from the first day of hospitalization. A new benefit period could not begin until 90 days after the patient left the hospital or nursing home.

Hospital Care

Included as hospital benefits are: bed and board; nursing and related services; customary medical social services; drugs, biologicals, supplies, appliances and equipment for use in the hospital; and, diagnostic and therapeutic items or services used in the hospital.

Excluded would be medical or surgical services, except in the fields of pathology, radiology, physiatry, and anesthesiology. Interns' and residents' services would be covered where the physician is under an approved teaching program.

Nursing Home Service

Nursing home coverage under the bill is defined as services provided by a "skilled" nursing facility, after transfer from a hospital.

Specific services covered are: bed and board; nursing care; physical, occupational or speech therapy; medical social services; drugs, biologicals, supplies, appliances and equipment which are furnished for use in the facility; and, other services necessary to the health of the patient and generally supplied by such institutions.

Home Health Care

Home health services would be those furnished to an individual, who is under the care of a physician, by a home health agency. A home health agency is defined as a tax-exempt public or private nonprofit organization which is primarily engaged in providing skilled nursing care or other therapeutic services, and whose policies are established and controlled by professional personnel, including one or more physicians.

Part-time or intermittent nursing care would be covered, as would physical, occupational and speech therapy, medical social services, medical supplies and appliances (other than drugs and biologicals), and certain homemaker's services.

Out-Patient Diagnosis

Out-patient hospital diagnostic services would be those services which are furnished to an individual as an out-patient by a hospital, or by others under arrangements made by a hospital.

Policies and Regulations

The bill declares it to be a Congressional policy that home care, nursing home care and hospital care be used in that order, on the basis of meeting the need with the least expensive service.

Services would be provided upon written application of the patient, which must be certified as a medical necessity by a licensed doctor of medicine or osteopath. Recertification of the need *could* be provided by regulations.

The need for in-patient hospital or nursing home services in excess of 30 days would have to be reviewed by a "hospital utilization committee" or "nursing facility utilization plan," as the case may be.

The bill contains a prohibition against interference by any federal official with the practice of medicine, or in the selection, tenure or compensation of any provider of service, or to exercise supervision or control over the operation of any provider of service, except as specifically provided.

Payment

Payment for services would be based on the "reasonable cost" of services and regulations would prescribe methods of determining such costs.

The provider of services would have to sign an agreement not to charge the patient or other persons for services covered under

the law, except for seeking recovery of the authorized deductibles, or for extra services not provided at government expense.

Other Provisions

H.R. 4222 would also increase the maximum cash social security benefit from $127 per month to $130 per month. The maximum family benefits would be raised from $254 to $260 per month.

Financing

To finance the aged care program, social security taxes in 1962 would be increased from the present 6% (3% employee—3% employer) on a tax base of $4800 to 6½% (3¼% employee—3¼% employer) on a tax base of $5,000. This ½% increase and enlargement of the tax base by $200 would mean an increase in annual social security taxes from a total of $288 to $325.

School Aid

In his health message, the President also proposed a 10-year $750 million medical and dental school construction program and federal scholarships for medical and dental students.

Under the scholarship plan, each institution would be entitled to an amount equal to $1,500 multiplied by 25% of the freshman class. In subsequent years, these scholarships would be available to each entering class, quadrupling the original financial outlay.

The President also urged a cost of education grant which would equal an amount of $1,000 multiplied by 25% of the freshman class. He further suggested extension of the research grant programs for three years, with an increase in the annual appropriation from $30 million to $50 million.

Community Services

Mr. Kennedy asked for the establishment of a permanent program under which grants would be made to the states to improve community services to patients outside the hospital. In addition, he recommended the establishment of a National Institute of Child Health and Human Development.

Annual Meeting Business Affairs Emphasized

"The resolutions which we introduce and consider at our state meeting are of far more consequence than is realized by the average member of organized medicine."

So said Marshall O. Hart, M.D., Speaker of the OSMA House of Delegates, in discussing plans for the Annual Meeting of the House of Delegates next May 7th.

"The actions of our policy-making body let the people and lawmakers know what our thinking is concerning vital problems in professional and community life," Doctor Hart added. He urged county medical societies to exercise mature, considered judgment in evaluating the complex problems facing medicine today, and to draft well-researched resolutions for submission to the House of Delegates.

Call for Resolutions

All county medical societies were previously contacted about the preparation of resolutions and told that they must be sent to the association headquarters by April 1st.

The House of Delegates will formulate association policy on the basis of these resolutions and the reports of association committees. When indicated, proposals approved at the state association level will be transmitted to the AMA meeting in June, and may possibly form the basis of national medical policy.

"Oklahoma's AMA Delegates have been quite successful in the past in getting resolutions through the national House of Delegates," Doctor Hart said, "and I hope that our state meeting this Spring will provide them with material which will make a worthwhile contribution to the national picture."

The Meetings

The Oklahoma House of Delegates will meet at 10 a.m. in the Pompeian Room of Tulsa's May Hotel, May 7, 1961. On June 25th, the AMA body will convene at the Statler-Hilton Hotel in New York City.

In keeping with a previous OSMA House of Delegates policy, advance information on business items scheduled for the May meeting will be printed in the April issue of the association journal, which has been designated as the annual meeting issue.

Hospitals Wage War On Welfare Program

Social welfare philosophy is being severely tested in Oklahoma as a result of "Operation Echo," a campaign of the Oklahoma Hospital Association to recover full per diem costs on hospitalized indigent and medically indigent public welfare recipients.

At stake is the question of whether or not hospitals should be *completely* reimbursed for "charity" care through tax funds.

The Oklahoma Hospital Association feels that the present Department of Public Welfare system is unfair to the hospitals and the paying patients. Hospitals are now receiving audited per diem costs, but a current ceiling of $20.93 has been set by the Department, based on a formula derived from per diem rates at University Hospital.

Administrators of hospitals claim that many hospitals have costs higher than the maximum payable and, what is worse, there is no payment at all received for patients who stay in the hospital beyond the twenty-one day limit. To compensate for an alleged over-all deficit of 20%, they say their only recourse is to jack up the room charges for private-pay patients. This, they refer to as a "sick-tax."

As a separate but related grievance, hospital administrators challenge the regulation which prevents them from billing the patient directly for any expenses not fully paid for by the government agency. Now they must try to recover such deficits from relatives or friends of the patient. If the hospitals can't have full costs paid by the welfare department, they want authorization to bill the patient directly for any difference between the government payment and the hospital's billed charges.

Modus Operandi

To accomplish their goals, the hospital administrator group began in January holding regional meetings with hospital governing boards, urging the board members and community leaders to prevail upon the welfare department, state legislators and the governor to increase payments to hospitals.

They have also marshalled hospital auxiliaries and have launched direct mail campaigns at state legislators and physicians.

The mailing to the physicians of Oklahoma went out on February 2. Neither the letter nor the enclosed brochure was channeled through the Oklahoma State Medical Association for its approval and endorsement.

Reactions

L. E. Rader, state welfare director, responded to the campaign by stating that adequate funds were not available to meet hospital demands for full reimbursement. Furthermore, he said it was against Federal regulations under the matching-fund program to permit direct billing of the patients for services purchased by the department. He said he had received word from Federal officials that such an action would jeopardize Federal participation.

Oklahoma's lawmakers also reacted to the promotion. Bills have been introduced in both the Senate and the House of Representatives to freeze the maximum welfare department per diem payments to correspond to the University Hospital formula.

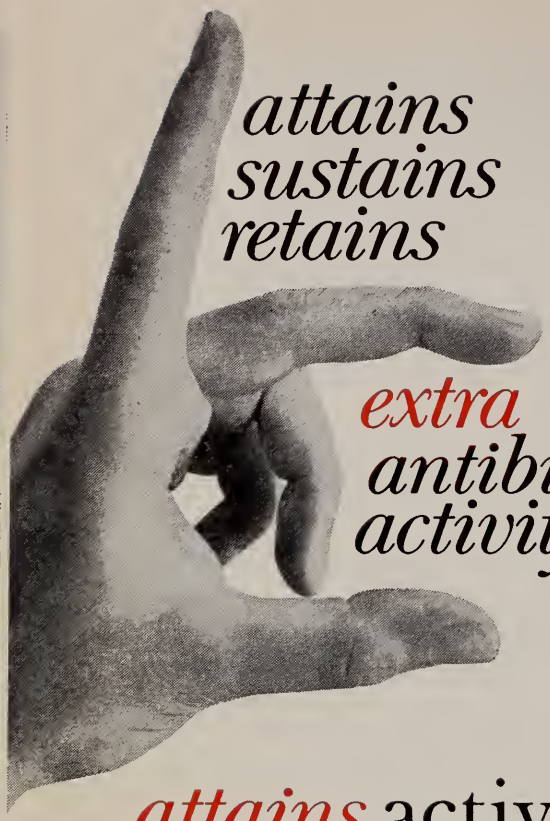
Some legislators are reported to have seriously questioned paying more for two hospital days than recipients receive as a monthly food allowance. Whether it's a case of comparing apples to oranges or not, some legislators are wondering if hospitals aren't already getting too large a piece of the welfare pie.

Philosophy

Who is primarily responsible for charity care seems to be the basic question arising from the controversy.

The Oklahoma State Medical Association's Committee on Welfare has ruled that tax-supported programs should be employed as an ultimate resource, to the extent that individual family and community responsibilities should be discharged before the state and Federal governments are called upon.

The medical group has not entered into the fray, however, since its opinion has not been sought by the hospital association either before or during the campaign.



attains
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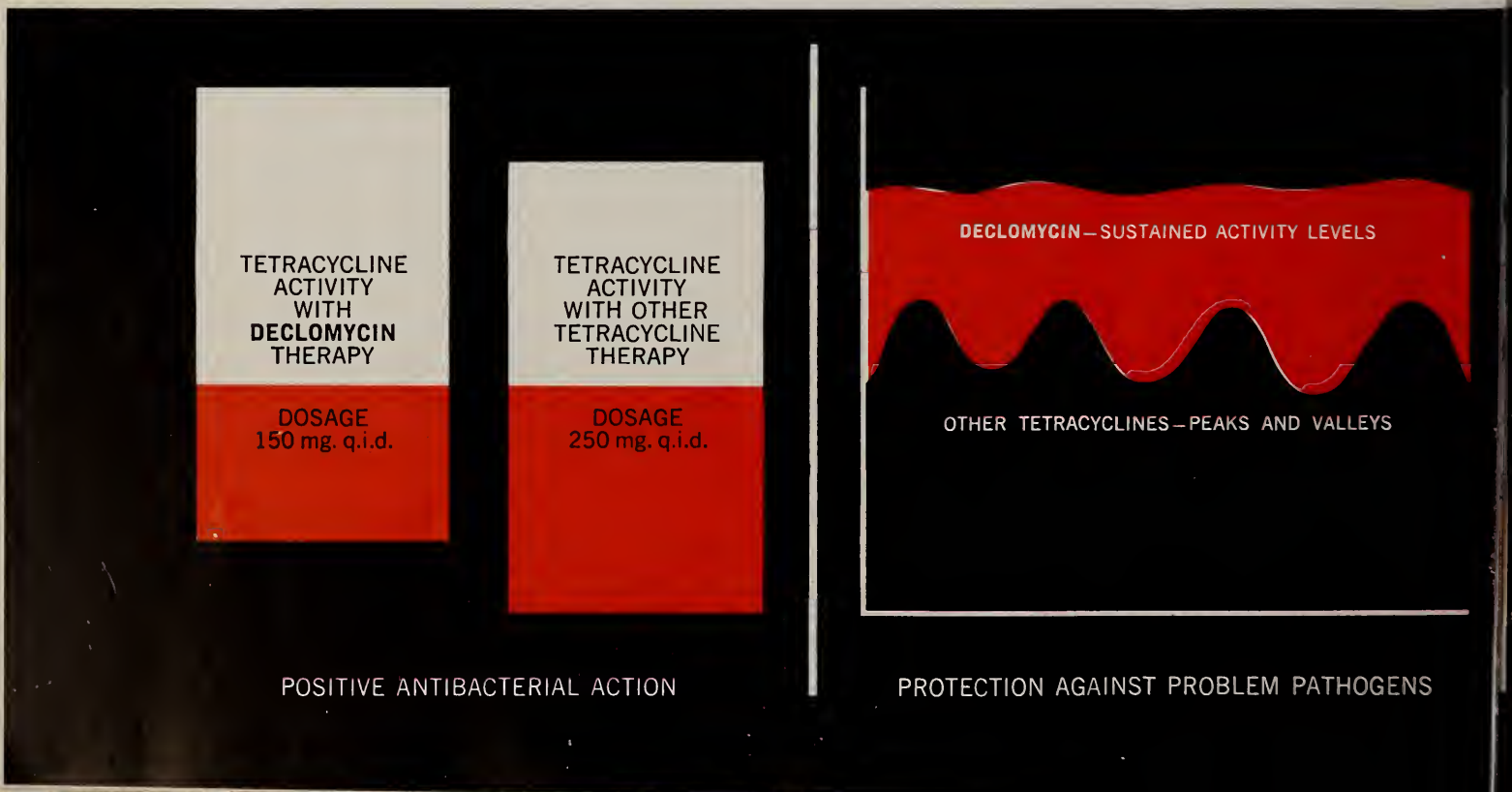
DEC

attains activity levels promptly

DECLOMYCIN Demethylchlortetracycline attains—usually within two hours—blood levels more than adequate to suppress susceptible pathogens—on daily dosages substantially lower than those required to elicit antibiotic activity of comparable intensity with other tetracyclines. The average, effective, adult daily dose of other tetracyclines is 1 Gm. With DECLOMYCIN, it is only 600 mg.

sustains activity levels evenly

DECLOMYCIN Demethylchlortetracycline sustains, through the entire therapeutic course, the high activity levels needed to control the primary infection and to check secondary infection at the original—or at another—site. This combined action is usually sustained without the pronounced hour-to-hour, dose-to-dose, peak-and-valley fluctuations which characterize other tetracyclines.

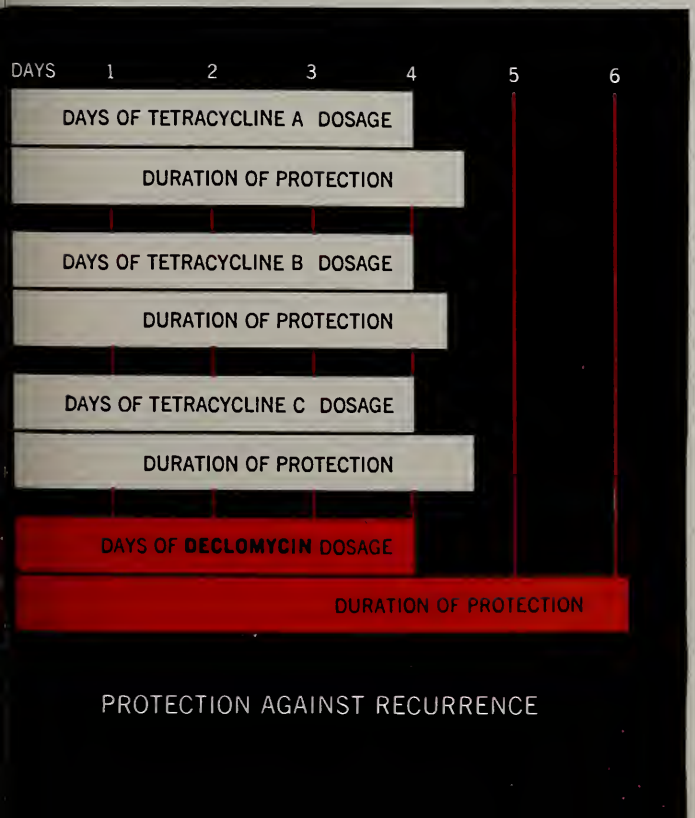


LOMYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

retains activity levels 24-48 hrs.

DECLOMYCIN Demethylchlortetracycline retains activity levels up to 48 hours after the last dose is given. At least a full, extra day of positive action may thus be confidently expected. The average, daily adult dosage for the average infection—1 capsule q.i.d.—is the same as with other tetracyclines...but **total** dosage is lower and duration of action is longer.



CAPSULES, 150 mg., bottles of 16 and 100. **Dosage:** Average infections—1 capsule four times daily. Severe infections—Initial dose of 2 capsules, then 1 capsule every six hours.

PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. **Dosage:** 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into 4 doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored), bottles of 2 and 16 fl. oz. **Dosage:** 3 to 6 mg. per pound body weight per day—divided into 4 doses.

PRECAUTIONS—As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics. The patient should be kept under constant observation.

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Kerr Will Address AMA Conference

Oklahoma's Senator Robert S. Kerr will appear as a featured speaker in Chicago, March 18-19, when the American Medical Association holds a medical legislative conference at the Pick-Congress Hotel.

The main agenda item for the meeting will be H.R. 4222, the controversial Health Insurance Benefits Act of 1961. Kerr, as co-author of a state-federal matching fund program to provide health care for the indigent elderly, has steadfastly opposed the use of the Social Security mechanism to fnnance health care, as is provided in H.R. 4222.

His own legislative proposal, known as the Kerr-Mills Bill, became law last September, and has since been implemented in Oklahoma and four other states. Forty-one other states have introduced legislation, or are drafting bills to provide the necessary state financial support. Properly implemented, the program not only expands health care benefits for old age assistance recipients, but also covers borderline individuals who cannot meet their health care costs.

In contrast to the Kerr-Mills bill which is designed to care for those who cannot care for themselves, the Social Security legislation would make it a compulsory matter without regard to financial need. The bill offers all Social Security beneficiaries in-patient and out-patient benefits at an eventual annual cost of over $2 billion.

Opposes New Bill

The senior Senator from Oklahoma will address a luncheon assembly of AMA and state medical association officers on March 18th. He is expected to reiterate his legislative opposition to the Social Security bill now pending in Congress.

Previously, on January 18th in Oklahoma City, he told members of the Oklahoma Association of Health and Accident Insurors that he could not go along with the proposed legislation. Furthermore, he said he firmly believed that it should be the right of every physician to choose his own patients, and the right of every patient to choose his own physician.

At the same meeting, he paid tribute to the Oklahoma State Medical Association for its help during the Kerr-Mills legislative campaign. He singled out OSMA President Walter E. Brown, M.D., and Executive Secretary Dick Graham for special words of appreciation. The pair had attended the meeting on invitation from the insurance men.

AMA Plan

To meet the test of the forthcoming legislative threat, the AMA is expected to swing into a full-scale public relations campaign, in cooperation with its constitunent societies and other business and pofessional groups. The purpose of the Chicago meeting is to brief state association leaders on the issues involved and the techniques to be employed to meet them.

In recent encounters with proponents of the Social Security measure, the AMA has pleaded for time; time to give the four month's old Kerr-Mills bill a chance to prove its effectiveness.

Paradoxically, Social Security supporters have already branded Kerr's bill a flop because it has not been fully implemented at the state level, while their own bill will admittedly require two years for full implementation.

Oklahoma Representatives

Representing the Oklahoma State Medical Association at the AMA meeting will be: Doctor Brown and Mr. Graham; Clint Gallaher, M.D., President-Elect; John E. McDonald, M.D., member of the AMA Council on Legislative Activities; J. R. Stacy, M.D., Chairman of the OSMA Council on Public Policy; and, R. Q. Goodwin, M.D., Alternate Delegate to the AMA and member of the Council on Public Policy.

Lawton Hosts Second OSMA Regional Meeting

Lawton's Westside Country Club was the site of the Oklahoma State Medical Association's Second Regional Postgraduate Meeting, held on February 28th. Local arrangements were handled by L. M. White, M.D., Lawton, member of the OSMA's Postgraduate Education Committee.

The enthusiasm of Southwestern Oklahoma physicians for the "hometown" program was evidence by an attendance of 42. Registrants were treated to a four hour afternoon and evening presentation on "The Lung," for which they are eligible to receive an equal number of hours of Category I credit from the American Academy of General Practice.

Conducting the joint project of the OSMA and the medical school were lecturers Gilbert S. Campbell, M.D., who spoke on "Respiratory Acidosis"; Warren L. Felton, M.D., who spoke on "Surgical Complications of Pulmonary Infections"; Harold G. Muchmore, M.D., who presented "Recent Advances in Viral Respiratory Diseases"; and, James F. Hammarsten, M.D., whose presentation was on "Pathophysiology of Emphysema."

The program which began at 4:00 p.m., featured basic science, diagnostic and therapeutic considerations. After two hours of instruction, a dinner was held at the club, followed by an additional hour of instruction and a closing hour of discussion. A registration fee of $7.50 covered the complete educational program and the dinner.

Endorsed by Delegates

The Lawton meeting, its predecessor in Ponca City, and future meetings of this type were approved by the House of Delegates last Spring. According to R. R. Hannas, M.D., Chairman of the Council on Postgraduate Education from Sentinel, "The response to these regional meetings indicates that the postgraduate series is filling an unmet educational need. The whole purpose is to bring quality postgraduate courses close to home, thereby conserving the physicians' time."

Participants

Attending the Lawton event were: C. C. Allen, M.D., Frederick; Donald A. Angus, M.D., Lawton; Howard Angus, M.D., Lawton; Frank H. Austin, M.D., Lawton; H. R. Bender, M.D., Lawton; James H. Bushart, M.D., Lawton; Avalo V. Caldwell, M.D., Lawton; Hugh M. Conner, M.D., Cyril; E. T. Cook, M.D., Anadarko; Ross P. Demas, M.D., Lawton; John Eldard, M.D., Ft. Sill; John H. Ennis, M.D., Cyril; L. W. Ferguson, M.D., Lawton; Leslie T. Hamm, M.D., Lawton; R. R. Hannas, M.D., Sentinel; Forest D. Harris, M.D., Lawton; J. T. Hicks, M.D., Lawton; R. G. Johnson, M.D., Frederick; William P. Jolly, M.D., Lawton; F. David Kalbfleisch, M.D., Lawton;

John A. Lupas, M.D., Lawton; Lloyd McArthur, M.D., Lawton; Chesley M. Martin, M.D., Elgin; William Matthey, M.D., Lawton; Royce B. Means, M.D., Lawton; Lester L. Moline, M.D., Lawton; W. B. Moran, Preceptee, Altus; N. D. Owrey, M.D., Lawton; Lee Pullen, M.D., Waurika; Cooper D. Ray, M.D., Altus; Bruce E. Rabuck, M.D., Ft. Sill; H. C. Smith, M.D., Lawton; C. N. Talley, M.D., Marlow; L. M. White, M.D., Lawton; Walter Wicker, M.D., Lawton; F. L. Worthen, M.D., Lawton; and Don Blair, Oklahoma City.

Muskogee Picked for Next Postgraduate Meeting

Pursuing his plans to conduct additional regional postgraduate education meetings before May, Doctor R. R. Hannas, Chairman of the Council on Professional Education, has announced that the next meeting will be held in Muskogee on April 18th.

The program will be a repeat of the one held January 24th in Ponca City, which covered basic science, diagnostic and therapeutic considerations of the kidney.

Conducting the course will be a team of instructors from the University of Oklahoma School of Medicine; Doctors John P. Colmore, Robert Lindeman and W. O. Smith. Their presentations will be designed to appeal to general practitioners and specialists alike.

The program will begin at 4:30 p.m. After two hours' instruction, a dinner will be held, followed by an additional hour of lecture and an hour of discussion. Price will be $7.50, which includes the dinner and tuition.

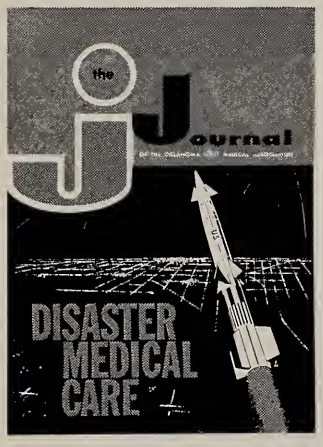
Special 'Disaster' Journal Coming

The May issue of the OSMA Journal will be completely devoted to the subject, "Disaster Medical Care."

According to William Reiff, M.D., Chairman of the Association's Disaster Medical Care Committee, "This special issue of the *Journal* is an effort to place proper emphasis on medical preparedness by collecting under one cover the basic information needed by physicians, individually and collectively, to meet a major medical emergency."

"While the issue will contain timely information," he said, "it will also serve as a compact reference item. The committee and the *Journal's* Editorial Board hope that the magazine will be read by every state physician, then retained in his permanent library."

State and national authors are now submitting articles on such subjects as: Thermonuclear War—How to Win One; The Communist Mind; National, State and Local Civil Defense Plans; Small Community Organization; Manpower Training; Role of the Red Cross; Sorting and Treatment of Mass Casualties; War Surgery; Thermal Burns; Radiation; and, Chemical Warfare.



This red-orange and black cover, featuring the Nike-Zeus defensive missile, has been especially prepared for the May Journal.

Various news items will also carry out the overall theme, and rosters of key Oklahoma personnel will be presented for reference.

"The magazine will be printed in sufficient quantity for extra distribution to civic officials and opinion leaders throughout the state, as well as to all major news media," Reiff said.



The 160 acre lake pictured above is one of many now available for lease. It is situated near Weatherford.

Oklahoma Lakes for Lease or Sale

Many Oklahoma lakes which have been built or are planned for construction under the Federal Watershed Protection and Flood Prevention Act are being offered for lease or sale through the Bureau of Indian Affairs.

While these reservoirs are primarily intended for flood control, the government permits surface use of the water for recreational purposes. Since many of the lakes are situated on restricted Indian land, the Anadarko office of the Bureau is assisting the land owners in acquiring short or long-term recreational leases, or in selling the lakes in some instances.

Physician-sportsmen may receive detailed information on such hunting and fishing sites by contacting the Bureau of Indian Affairs, Anadarko Area Office, Branch of Realty, Anadarko.

Big Program

Dating back to 1936 when Congress authorized the development of eleven river basins in the nation, Oklahoma has been a forerunner in flood control construction. The Washita River basin, one of the original eleven studied, has been authorized 783 reservoirs, 376 of which have already been built.

Under 1954 amendments to the legislation, authorizing reservoirs outside the Washita basin, many additional lakes are being built, and a total of 517 are planned.

Physician Questions Hospital Staff Vacancies

Reduction in the number of foreign medical graduates in this country has little to do with the growing number of unfilled hospital house staff positions, a former medical school dean said recently.

The unfilled positions result because more internships and residencies have been approved than are really needed or can actually be filled—and not because the number of foreign graduates is decreasing, Willard C. Rappleye, M.D., said in *Hospitals*, Journal of the American Hospital Association.

Doctor Rappleye, now president of the Josiah Macy Jr. Foundation, New York, was formerly dean of Columbia University College of Physicians and Surgeons.

A program to require foreign medical graduates to pass an examination given by the Educational Council for Foreign Medical Graduates is now in effect and has produced the charge that its implementation will produce a deficit in the number of physicians available to fill house staff positions in United States hospitals.

Approximately 12,000 foreign graduates now occupy about 33 per cent of the house staff positions in the country, he said.

The Educational Council for Foreign Graduates, supported by several major medical, hospital and health organizations, was set up to promote educational opportunities for foreign graduates and to make sure that they reach a level of attainment comparable to graduates of United States schools.

Qualification tests have been given at intervals both in the United States and abroad. The most recent test in September 1960, was taken by 8,713 graduates, of whom 71 per cent were certified.

The American Medical Association and the American Hospital Association ruled that as of December 31, 1960, hospitals must remove unlicensed or uncertified graduates from patient care situations or face loss of approvals. The physicians who were removed from patient care situations may take the next examination, scheduled for April 4. In the meantime, many hospitals have set up educational courses for these physicians, with the aim of preparing them for the examination.

The real problem of house staff positions lies in the fact that the number of available internships (13,032) and residencies (30,733) far exceeds the number of graduates of American medical schools (7,081 in 1960). And too many of the positions, according to Doctor Rappleye, are now "intended and designed more as service functions for the staff and hospital than for education purposes," their real function.

Internship and residency programs must be turned into real educational programs—both for graduates of American and foreign medical schools. The programs for foreign graduates urgently need "a long-term, imaginative approach," especially in terms of meeting America's promises of aid to under-developed countries, he continued.

Most foreign graduates are expected to return home, where they will organize and improve medical education and service. Thus their educational programs here should be geared to such an aim, Doctor Rappleye said.

The over-all question of staffing American hospitals must also be solved. Temporarily, it may be necessary for hospitals to set up rotating programs whereby the attending physicians remain on call for the entire hospital on weekends and nights.

The most logical solution to the problem, Doctor Rappleye believes, is "probably employment of well qualified recent graduates on a full-time or part-time basis by the hospitals." Such young physicians can remain in the positions for several years while establishing themselves in the community.

By having such staff members, the intern and residency programs can then become truly educational programs, he said.

SW Surgical Congress Meets Next Month

The thirteenth annual meeting of the Southwestern Surgical Congress will be held April 1-13 at the Park Plaza Hotel, St. Louis.

Headlining the list of guest speakers are Warren H. Cole, M.D., Professor of Surgery at the University of Illinois; Henry K. Ransom, M.D., Professor of Surgery at the University of Michigan; O. H. Beahrs, M.D., Assistant Professor of Surgery at the University of Minnesota; and, Louis T. Byars, M.D., Associate Clinical Professor of Surgery, Washington University.

As an innovation to the normal scientific program, April 13th will be designated as "Clinical Day." The day will consist of selected papers of clinical interest, operative clinics and tumor clinics, all under the direction of C. Rollins Hanlon, M.D., Professor of Surgery at St. Louis University, and Carl A. Moyer, M.D., Bixby Professor of Surgery at Washington University.

The scientific program will also include panel discussions on the subjects "What's New In Surgery?" and "Surgery in Sigmoid Diverticulitis."

A break in the program will occur on Tuesday afternoon, April 11th, when members and guests will travel to historic Grants Farm for a social hour sponsored by Anheuser-Busch.

On Wednesday evening, April 12th, the President's Banquet will be held, honoring Howard D. Cogswell, M.D., Tuscon, Arizona.

The Council of the Congress will meet prior to the convention, on Sunday morning, April 9th. The Annual Executive Session for fellows of the Congress will be held Wednesday, April 12th, with all members urged to attend this business meeting.

Hotel reservations should be secured by writing direct to the Park Plaza Hotel, St. Louis, making reference to the Congress meeting.

What's Your Hobby, Doctor?

The DOCTOR'S HOBBY SHOW has become one of the outstanding attractions at the OSMA ANNUAL MEETING. A project of the Woman's Auxiliary, the show offers physicians an excellent opportunity to display the products of their leisure time. If you have a hobby, don't keep it a secret . . . Show your colleagues what you can do . . . APPLY NOW!

Doctor's Hobby Show

O.S.M.A. Annual Meeting

Mayo Hotel

Tulsa, Oklahoma

MAY 7, 8, 9, 1961

Application For Hobby Show Space

55th ANNUAL MEETING

OKLAHOMA STATE MEDICAL ASSOCIATION

DESCRIBE EXHIBIT, including information as to size, shape and vlaue (insurance is provided):

IMPORTANT: Deliver Exhibit to Mayo Hotel by noon, May 6. Your Exhibit will be personally attended and insured at all times. It must be picked up by noon, May 10, when management responsibility ends.

MAIL THIS FORM TODAY!

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2440 E. 26th Place
Tulsa 14, Oklahoma

State Co-Chairmen—Mrs. Herbert Forrest
4340 South Atlanta Ave.
Tulsa, Oklahoma

Mrs. W. B. Renfrow
2721 N.W. 33rd
Oklahoma City, Oklahoma

Reuther to Appear Before GP's in Miami

What is medicine's future—in the eyes of labor, management, the farmer and the profession itself? How do the leaders of these major economic and social forces view medicine today, and what role do they see for it tomorrow?

To bring their viewpoints together in a microcosmic preview, the American Academy of General Practice will open its Annual Scientific Assembly with a panel discussion featuring Walter Reuther, President of the United Auto Workers, Doctor E. Vincent Askey, AMA chief, and three other national figures from the Farm Bureau, Blue Shield and U.S. Steel.

More than 3,500 family doctors are expected to attend the April 17-20 meeting at Miami Beach's auditorium and convention hall. The Scientific Assembly is designed to re-emphasize basic medicine and preview new horizons for the nation's general practitioners.

Scientific Program

Scientific lectures will cover a wide spectrum of medical experience. Among second-day features will be a panel discussion on "Trauma of the Extremities" and lectures on "The Female Hormones" and "Radiation and Pregnancy." The third day will open with "Diseases of Medical Progress" and later will feature "Effects of Exercise on Cardiacs," "Living With Cancer" and "Tumors of the Skin." The third day's lectures will include "Common Ear Problems" and a panel discussion, "Adolescent and Post Adolescent Problems." Many of the lectures will be borne out graphically in the scientific exhibits, of which there will be more than 120.

Business

Preceding the scientific assembly will be the annual meeting of the Academy's policy-making Congress of Delegates. It will convene at 2 o'clock Saturday, April 15, in the Eden Roc hotel. Delegates from all 50 states, Puerto Rico and the District of Columbia will meet until noon Monday, April 17, when the scientific sessions open.

On Wednesday, April 18, the President's reception and dance will climax the Assembly's social activities. Just prior to this event, the President-Elect, Doctor Floyd C. Bratt, Rochester, New York, will receive the gavel from outgoing President Doctor John G. Walsh, Sacramento, California.

E. A. Johnson, M.D., Made Honorary-Life Member

At a recent Valentine dinner meeting of the Choctaw-Pushmataha Medical Society, E. A. Johnson, M.D., Hugo, was awarded an Honorary-Life Membership in the Oklahoma State Medical Association.

On hand to make the presentation was W. A. Hyde, M.D., OSMA Councilor from Durant. The nominating citation was read to the group and Doctor Hyde spoke warmly of his personal admiration of Doctor Johnson.

As an added tribute to the pioneer physician, the society presented Doctor Johnson with a brass vase and a special valentine.

At the same meeting, H. D. Wolfe, M.D., was named President for 1961 and William Woodruff, M.D., was elected to the office of President-Elect.

Oklahoma Chapter AAGP Names Officers

Harlan Thomas, M.D., Tulsa, took office as president of the Oklahoma Chapter of the American Academy of General Practice during the group's recent annual meeting. Other officers include Nolen Armstrong, M.D., Oklahoma City, vice-president and W. R. Cheatwood, M.D., Duncan, president-elect.

Since the founding of the Oklahoma Chapter in 1947, the group has grown to a total membership of 354.

The next annual meeting of the chapter will take place in Tulsa at the Tulsa Hotel, January 4-5, 1962.

COUNTY MEDICAL SOCIETY OFFICERS

of the

Oklahoma State Medical Association

SOCIETY	PRESIDENT	SECRETARY-TREASURER
ATOKA-BRYAN-COAL	B. B. Coker, M.D. Durant	Raymond L. Engles, M.D. Durant
BECKHAM	William G. Husband, M.D. Elk City	William Leebron, M.D. Elk City
BLAINE	(not reported)	Virginia Curtin, M.D. Watonga
CADDO	Marshall H. Ingram, M.D. Anadarko	G. E. Haslam, M.D. Anadarko
CANADIAN	Kenneth Peacher, M.D. El Reno	O. J. Hake, M.D. El Reno
CARTER-LOVE-MARSHALL	J. F. York, M.D. Madill	Claude H. B. Brown, M.D. Ardmore
COOKSON HILLS	C. T. Morgan, M.D. Tahlequah	Bob G. Mitchell, M.D. Sallisaw
CHOCTAW-PUSHMATAHA	Henry D. Wolfe, M.D. Hugo	Elizabeth Fleming, M.D. Hugo
CLEVELAND-McCLAIN	W. G. Long, M.D. Purcell	Gladys Smith, M.D. Norman
COMANCHE-COTTON	J. T. Hicks, M.D. Lawton	Forest D. Harris, M.D. Lawton
CRAIG-OTTAWA	Wiley G. Chestnut, M.D. Miami	H. W. Wendelken, M.D. Miami
CREEK	O. H. Patterson, M.D. Sapulpa	Gerald Zumwalt, M.D. Sapulpa
CUSTER	Ralph Simon, M.D. Clinton	Dayton Royse, M.D. Weatherford
EAST CENTRAL	Emil F. Stratton, M.D. Muskogee	Benjamin H. Gaston, M.D. Muskogee
GARFIELD-KINGFISHER	Avery B. Wight, M.D. Enid	Roscoe C. Baker, M.D. Enid
GARVIN	James Virgil Simmering, M.D. Wynnewood	Hugh H. Monroe, M.D. Pauls Valley
GRADY	Harvey D. Elkouri, M.D. Chickasha	Sam Davis, M.D. Chickasha
GRANT	Robert W. Choice, M.D. Wakita	F. P. Robinson, M.D. Pond Creek
GREER	Tom L. Wainwright, M.D. Mangum	J. B. Hollis, M.D. Mangum
HUGHES-SEMINOLE	D. H. Cramblet, M.D. Holdenville	H. V. Schaff, M.D. Holdenville
JACKSON	Cooper D. Ray, M.D. Altus	Joan K. Hiett, M.D. Altus
JEFFERSON	Lee Pullen, M.D. Waurika	Wm. A. Heflin, M.D. Ryan
KAY-NOBLE	Art Brown, Jr., M.D. Perry	C. H. Cooke, M.D. Perry
KIOWA-WASHITA	Aubrey E. Stowers, M.D. Sentinel	L. G. Livingston, M.D. Cordell
LeFLORE-HASKELL	C. S. Cunningham, M.D. Poteau	K. G. Lowe, M.D. Poteau
LINCOLN	Harold Baugh, M.D. Meeker	Ned Burleson, M.D. Prague

LOGAN	L. H. Ritzhaupt, M.D. Guthrie	Joseph R. Henke, M.D. Guthrie
McCURTAIN	(not reported)	Thomas E. Rhea, M.D. Idabel
MURRAY	W. D. DeLay, M.D. Sulphur	Robert S. Davis, M.D. Sulphur
NORTHWESTERN	Rhonald A. Whitneck, M.D. Woodward	M. C. England, M.D. Woodward
OKFUSKEE		
OKLAHOMA	Richard E. Carpenter, M.D. Oklahoma City	Harrell C. Dodson, M.D. Oklahoma City
OKMULGEE	J. R. Cotteral, M.D. Henryetta	R. D. Miller, M.D. Okmulgee
OSAGE	C. Cody Ray, M.D. Pawhuska	Frank M. James, M.D. Hominy
PAYNE-PAWNEE	Haskell Smith, M.D. Stillwater	Walter L .Honska, M.D. Stillwater
PITTSBURG	J. W. McCauley, M.D. McAlester	H. C. Wheeler, M.D. McAlester
PONTOTOC	Carl D. Osborn, M.D. Ada	O. M. Welborn, M.D. Ada
POTTAWATOMIE	Robert B. Zumwalt, M.D. Tecumseh	Clinton Gallaher, M.D. Shawnee
ROGERS-MAYES	Clarence B. Pinkerton, M.D. Pryor	Orville U. Holt, M.D. Claremore
STEPHENS	R. H. Mayes, M.D. Duncan	J. P. Keller, M.D. Duncan
TEXAS-CIMARRON	Robert Lee Cozine, M.D. Texhoma	Larry L. Lowrey, M.D. Guymon
TILLMAN	William G. Harvey, Jr., M.D. Frederick	Jack D. Honaker, M.D. Frederick
TULSA	Wendell L. Smith, M.D. Tulsa	Dixon N. Burns, M.D. Tulsa
WASHINGTON-NOWATA	John E. Scott, M.D. Bartlesville	Robert G. Allen, M.D. Bartlesville
WOODS-ALFALFA	I. F. Stephenson, M.D. Alva	C. A. Traverse, M.D. Alva

Britons Go to Graduated Health Tax

An alarming analogy was drawn in an editorial appearing in the *Chicago Tribune* of February 11th. The writer compared the evolution of Britain's National Health Service to the blossoming Social Security system in the United States.

Recently, British Conservatives have sought another increase in taxes to support their $2.5 billion per year health program. Nearly $2 billion of this amount is now coming out of general taxes, and the modest increase in the social security take will only relieve general revenue pressure by $182 million annually.

Since periodic increases in social security taxes have not kept pace with skyrocketing costs, the plan now is to adjust the base for social security taxes according to each individual's income. Thus, beginning in April, Britain will have a graduated health tax.

Current laws extending U.S. Social Security plans call for a bite of 9% of payroll by 1969. If health care and other liberalizations are added, the amount will reach 10% by 1969. British experience indicates that the health program will run at a loss, bringing about further increases and, eventually, a graduated tax.

Deaths

Finis W. Henderson, M.D.
1879-1961

Finis W. Henderson, M.D., 81-year-old, retired Tulsa physician, died January 18, 1961 in Tulsa.

A native of Killeen, Texas, Doctor Henderson received his medical education at the University of Arkansas School of Medicine where he graduated in 1917.

He was a general practitioner in Tulsa for 33 years before his retirement in 1951.

In recognition of his years of dedication to the medical profession, the Oklahoma State Medical Association presented Doctor Henderson with a Life Membership in 1951.

Reuben Worrell Williams, M.D.
1878-1961

Memorial services were held for Reuben Worrell Williams, M.D., former Anadarko physician on January 25, 1961 in Phoenix, Arizona.

A native of Bloomington, Illinois, Doctor Williams graduated from Rush Medical College in Chicago in 1906. After two years of practice in Galva, Illinois, he came to Anadarko in 1910, where his practice was interrupted only by his service during World War II. In 1951, he retired and moved to Evergreen, Colorado.

Doctor Williams was honored for his service to the medical profession when the Oklahoma State Medical Association presented him with a Life Membership in 1951.

Albert Loeb Salomon, M.D.
1889-1961

Albert Loeb Salomon, M.D., one of Oklahoma's earliest pediatricians, died in Norman on February 13, 1961.

Born in Vinegrove, Kentucky in 1889, Doctor Salomon graduated from the University of Louisville School of Medicine in 1910. He had practiced in Oklahoma City from 1919 to 1957.

Doctor Salomon was a Diplomate of the American Board of Pediatrics and a member of the American Academy of Pediatrics.

Doctor Salomon was honored in 1957 when OSMA awarded him a Life Membership in appreciation for his years of service to the medical profession.

John H. Lamb, M.D.
1905-1961

John H. Lamb, M.D., 55-year-old Oklahoma dermatologist and prominent civic worker, died in Baltimore, Maryland, February 23, 1961.

Born in Manila, Philippine Islands, Doctor Lamb came to Oklahoma with his family in 1917. After graduating from the University of Oklahoma School of Medicine in 1932, he took postgraduate work in Johns Hopkins and the Skin Cancer Hospital in New York City.

In addition to being one of the founders of the Oklahoma Medical Research Foundation, Doctor Lamb was a past president of the American Dermatological Association and the American Academy of Dermatology and chairman of the Department of Dermatology at the Oklahoma University Medical Center.

A music enthusiast, Doctor Lamb had served as president of the Oklahoma Symphony Society.

Auxiliary News

D. S. C. for Annis

If D. S. C's were awarded by the AMA, our recommendation should be for Edward R. Annis, M.D., whose name was unfamiliar to many of us until the recent Reuther TV handicap. For those auxiliary members and their husbands who missed the telecasts, we sincerely hope there will be a re-run. Doctor Annis' unusual abilities can be recognized in the January *Bulletin* article: *Woman's Auxiliary Role in Political Action.*

With poise, obvious intelligence and polish, this outstanding gentleman represented the medical viewpoint with quiet dignity, in spite of crude tactics and muddled untruths expounded by the self-styled "champeen of the peepul."

Throughout the years we have been urged as a group to become knowledgable in many fields. For the past several—and obviously for the future—years, concentrated effort must be made, not only to keep up with what is going on, but to be further prepared for any eventuality.

How can we become informed and simultaneously anticipate the legislative future? This is no small task, but it can be done and it can be interesting and rewarding. Each of us must inform our government representatives and convince our neighbors and friends to do likewise. This is a good beginning. And of course, each of us has acquired the emergency-contact habit by now. These things are basic.

Information Silo

Our county Legislation Chairman can offer us much. But some counties are small organizations, without such chairmen—here lies added need for even greater individual responsibility in gaining and compiling information. Following are some suggestions. Whether your membership is large or small, you may find them opening new lines of valuable thought:

1. Each auxiliary member can be a self-appointed speaker's bureau. How? Resolve to know as much as you can in regard to every point involved. Study the text of President Kennedy's special message to congress on health and hospital care, for example. Examine each point. Is this logical or illogical? Why? If you feel a bit insecure or vague when you reach some areas—then truthfully admit to yourself that you need to do some research on medical care costs, where the hospital dollar goes, just what voluntary health insurance accomplishes. Your own good judgment is the best background you can have.

2. Remember that you will not be talking with someone who feels as you do. Take a lesson from Doctor Annis: persuasion by personal conviction is effective only when and if we use intelligence coupled with patience. For most of us this is indeed difficult under present circumstances.

3. Accumulate a file on all related data. Study every scrap of material for and against welfare medicine. For example, *U. S. News and World Report,* February 6, contains a chart on new patterns in people's spending. A person comments: "I notice medical care has risen 22% since 1955." Be prepared for this casual reader who saw only what she was looking for. Tactfully call to her attention her obvious mis-reading; also mention that recreation, tobacco and liquor are almost equal on actual money spent, aren't they? Wonder with her if the $18.00 average spent by every family every month for over-the-counter laxatives, headache remedies, etc., are included in this statistic. What about the million spent on quack cancer and arthritic cures—the "guaranteed results" boys—do you suppose they, too, are included?

4. Now for finesse. Try to imagine with your inquirer a future based on public education: can you foresee, and help your verbal adversary imagine, that with her concerted help, too, we can educate people to channel these millions of dollars spent foolishly into their own voluntary health programs and insurance, into constructive care for the aged, based on need?

PHYSICIAN PLACEMENT

Anesthesiology

Richard S. Dillman, M.D., 529 Fifth Street, Ann Arbor, Michigan; age 35; married; University of Michigan, 1956; board eligible.

General Practice

Frank Augustus Bautz, M.D., 265 Concord Road, Sudbury, Massachusetts; age 46; married; Harvard Medical School, 1942; board eligible; eligible Summer 1961.

Floyd E. Webb, Jr., M.D., 2527 Webster Drive, Alexandria, Louisiana; age 27; married; University of Oklahoma, 1957; available August, 1961.

E.E.N.T.

August L. Stemmer, M.D., 20th Station Hospital, APO 696, New York, N.Y.; age 32; married; Harvard Medical School, 1953; board certified; Available May 1, 1961.

Industrial

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available immediately.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

James Stanford Haimsohn, M.D., 3340 Poplar Avenue, Memphis, Tennessee; age 43; married; University of Tennessee, 1942; board certified; available 90 days.

Sam A. Kinard, Jr., 3522 E. 17th Avenue, Denver 6, Colorado; age 29; married; Baylor University of Medicine, 1956; 2 years medical residency and 2 years cardiology residency; available July, 1961.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

George F. Winks, Jr., 217 S. Boulevard, Apt. 1, Richmond, Virginia; age 28; married; Medical College of Virginia, 1957; board eligible; available July 1, 1961.

Obstetrics and Gynecology

Philip Tabor Bennett, M.D., Quarters 739A, Maxwell A.F.B., Montgomery, Alabama; age 31; married; University of Texas Medical School, 1954; board eligible; available July 1961.

Walter G. Crowe, M.D., Mercy Hospital, Pride 4, Locust St., Pittsburgh, Pennsylvania; age 39; married; University of Tennessee College of Medicine, 1955; board eligible; available March 10, 1961.

Richard W. Fenaughty, M.D., 95 Hart Street, New Britain, Connecticut; age 31; married; State University of New York, 1957; available July 1961.

Milburn W. Hobson, M.D., 2011 West 39th, Kansas City, Kansas; age 30; married; Kansas University, 1955; available July 1, 1961.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

Orthopedics

Sheldon Roger, M.D., 1185 Holly Street, Denver, Colorado; age 31; married; Indiana University, 1953; board eligible; available July 1, 1961.

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Psychiatry

William L. Sherman, Jr., M.D., 201 East Kirby, Detroit 2, Michigan; age 38; single; Wayne State University College of Medicine, 1947; board eligible; available immediately.

Mary Eichhorn, M.D., 501 Fourth Street, Garden City, Kansas; age 38; single; University of Kansas, 1945; board certified; available immediately.

Preventive Medicine

Robert E. Jewett, M.D., 2820 Fairway Drive, Birmingham, Alabama; age 52; widower; Indiana University, 1934; board certified; desires administrative practice; available immediately.

Radiology

Quentin T. Brooks, M.D., 6922 Edgemoor Drive, Houston, Texas; age 40; married; Oklahoma University School of Medicine, 1953; board certified; available immediately.

Fred T. Hargrove, M.D., 217 North Pinewood Drive, Carthage, Texas; age 56; married; University of Oklahoma School of Medicine, 1934; board certified; available January 1, 1961.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty, broncho-esophagology and thoracic surgery; available immediately.

Morley Barsky, M.D., 12 Rosseau Road, Apartment 102, Downsview, Ontario, Canada; age 30; married; University of Manitoba, Winnipeg, Canada, 1955; available July 1, 1961.

Richard Harrod Blank, M.D., 2603 Willard Drive, Charlottesville, Virginia; age 32; married; Cornell University, 1953; board eligible; available July 1, 1961.

James Steward O'Hare, M.D., 104 West Madison, Baltimore, Maryland; age 39; married; University of Maryland, 1946; board certified; available immediately.

John William Heizer, M.D., 214 S. Huntington Avenue, Jamacia Plain (Boston), Massachusetts; age 32; married; Tufts University School of Medicine, 1956; board eligible; available July 1961.

Harry Houghton, M.D., 7223 W. Lakefield Dr., Milwaukee 19, Wisconsin; age 30; married; Western Reserve University, 1956; board eligible; available July 1, 1961.

John Mauver Kearney, M.D., 1036 Mt. Vernon Ave., Marion, Ohio; age 34; married, University of Pennsylvania, 1954; board eligible; available immediately.

David K. McAfee, M.D., 2560 McCurdy Way, Decatur, Georgia; age 32; married, Northwestern, 1953; board eligible; available July 1, 1961.

Thomas Roy Murphy, M.D., 718 West Cherry Street, Cherokee, Iowa; age 30; married, Dalhousie Medical School, Halifax, Canada, 1956; board eligible; available immediately.

LETTER TO THE EDITOR

To the Editor:

Reference is made to the editorial in the *Journal* of the Oklahoma State Medical Association of January, 1961, page 1, and signed H.T.R. (Henry T. Russell, M.D.).

I sincerely agree with the ideas expressed in this editorial. I would like, however, to suggest that the practice of medicine is becoming less attractive for another reason. The threat of further supervision of schools and of the practice of medicine itself by the federal government is an important factor. To me it seems the only way we might be able to correct this situation is to stop federal legislation which is designed to further increase the participation of the federal government. This cannot be done by the American Medical Association alone. It should challenge and secure the active interest of every medical doctor.

Very truly yours,
CLINTON GALLAHER, M.D.

25 YEARS AGO



Articles published in *The Journal* of the Oklahoma State Medical Association, March, 1936.

Urological Methods in the Treatment of Nephritis

Basil A. Hayes, M.D., F.A.C.S.
Oklahoma City

I submit for your consideration that the medical men need assistance in the treatment of nephritis. Their weapons of attack are supportive stimulants, dietary management, and diuretic drugs. These methods are likewise employed by the urologists with the addition that the urologists attempt to arrive at the specific predisposing cause of the condition and relieve it. The correct analysis and treatment of any case of kidney disease unquestionably leads to the cystoscopy and x-ray because this is the only way it can be properly done. Intravenous urography is many times incomplete and in many instances actually leads to fallacious conclusions. The cystoscope tells the story of the entire urinary tract and enables us to make proper pictures showing the condition of the kidney in a way which no other method will approach. It is likewise a therapeutic instrument and can be used to relieve the obstruction even as a bronchoscope is used in the relief of obstruction in the respiratory tract. Without using it the physician seeing a condition of kidney disease cannot possibly determine with any degree of accuracy whether his patient's anemia, hypertension, edema, nitrogen retention, pyuria, hematuria, or albuminuria are due to a so-called glomerulonephritis or to a back pressure nephrosis which causes symptoms of this same kind. It would seem logical, therefore, that all cases of kidney disease should be referred to a competent urologist first, then if he finds there is need for medical or obstetrical consultation, he can call for it.

During the past three years I have demonstrated in a series of more than eighty cases of toxemias of pregnancy that in every instance there is a very definite back pressure of urine and that this back pressure is merely giving rise to the symptoms of nephritis which are commonly seen in other conditions. I have also shown that relief of the back pressure relieves the toxemia, therefore feel that I am on safe ground when I say that virtually every toxemia of pregnancy is a back pressure phenomenon and should be so treated.

MISCELLANEOUS ADVERTISEMENTS

VACANCIES—1 General Surgeon, 1 Internist and 1 Admitting Physician for 390 bed Veterans Administration Hospital; Board Certified or Board eligible preferred for surgeon and internist; prefer Oklahoma licensure; salary range $7,560 to $15,030 depending upon quualifications; plus 15% additional if Board Certified, not to exceed $17,200; fringe benefits; citizenship required; preceptorship in General Surgery available. Write: Manager, Veterans Administration Hospital, Muskogee, Oklahoma.

WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association. P.O. Box 9696, Oklahoma City, Oklahoma.

OKLAHOMA CITY office space available in Medical Center with dentist and pharmacy. 2312 N.W. 23rd St., across the street from new $12,000,000 shopping center on Shepard tract. Private entrance, 415 square feet floor space, off-the-street parking. Contact James R. Ricks, M.D., 2316 N.W. 23rd St., JA 5-7438.

FOR SALE: Two practically new matching Hamilton Examining Tables, two treatment cabinets, two stools, two lamps, walnut desk with matching swivel chair, and two side chairs. Contact Frank H. Cooper, M.D., 502 South Crawford, Norman, Oklahoma, phone JEfferson 4-5322 or JEfferson 4-6644.

WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

HOUSE PHYSICIANS NEEDED immediately for Tulsa's new St. Francis Hospital. Contact Key A, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma, for further information.

WANTED: Old and antique medical books in pediatrics and neurology. Contact Lucius Waites, M.D., Department of Pediatrics and Neurology, University of Oklahoma Medical Center, Oklahoma City.

FOR SALE: One Hamilton Examining Table (1960 model), 6 months old. Like new. Contact C. P. Taylor, M.D., 1201 East 5th, Ada, Oklahoma, FE 2-4424.

OPPORTUNITY for General physician in Cement, Oklahoma. One other World War I veteran doctor presently practicing there. Office vacancy in the center of town across from the drug store in farming and oil community with nearby hospitals at Anadarko, Chickasha, Lawton and Cyril. If interested, contact Wade H. Vann, M.D., Cement, Oklahoma.

R.N.—experienced in Convalescent Hospital or Nursing Home administration. Capable of organizing new place as to detail of licensing, etc. Capable of evaluating facility already in operation. Available for interview with doctor interested in investing in profitable and needed project. Call GA 7-0571, Oklahoma City or write 5504 North Terry, Oklahoma City.

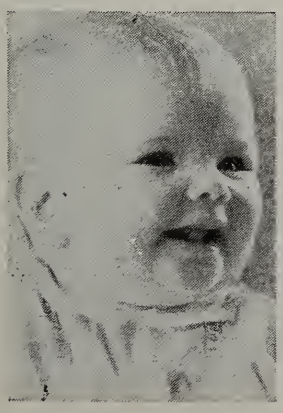
TINKER Air Force Base, Oklahoma, has vacancies for two Medical Officers, GS-13, $11,155 per annum. One is in the General Medicine and Surgery field, involving duties in the Out-Patient Clinic of the Base Hospital—new and modern building and facilities. This position could be utilized on swing shift (approximately 4:00 p.m. to midnight) if preferred. The other position is in the Occupational Health and Medicine field, but strictly a day-shift operation.

These positions are strictly 40-hours per week, with no "night calls." Doctors may continue private practice, during off-duty hours, as long as it does not interfere with their attendance and performance of duties at the Base. They may not accept or continue employment resulting in payment from the City, County, State, or other Federal agencies, due to dual compensation laws. Salary is increased by $260 per annum each eighteen months to a maximum of $11,935 per annum.

Qualification requirements for these positions and information about fringe benefits, such as retirement, may be obtained at any first or second class post office or through the Employment Branch, Tinker AFB, PE 2-7321, Extension 2691.



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*MC GOVERN, J. P., MC ELHENNEY, T. R., HALL, T. R., AND BURDON, K.D.: ANNALS OF ALLERGY 17:915, 1959.

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† PARABROMDYLAMINE MALEATE

Coming Meetings

STATE

Apr. 12—"Surgery—Techniques of Cardiac Resuscitation." Postgraduate course, auditorium, University of Oklahoma Medical Center.

May 7-9—Oklahoma State Medical Association, Mayo Hotel, Tulsa, Oklahoma.

May 10—"Infectious Diseases in Infancy and Childhood." Postgraduate course, auditorium, University of Oklahoma Medical Center.

Oct. 23-25—Oklahoma City Clinical. Biltmore Hotel, Oklahoma City.

REGIONAL

Mar. 18-21—Missouri State Medical Association, Hotel Muehleback, Kansas City, Missouri.

Mar. 20-24—"Medical Technology." Postgraduate course, University of Colorado Medical Center.

Apr. 16-19—Arkansas Medical Society. Hotel Marion and Robinson Auditorium, Little Rock, Arkansas.

Apr. 19-21—Second Annual Contact Lens Course. University of Texas Postgraduate School of Medicine, Houston, Texas.

Apr. 22-25—Texas Medical Association, Galvez and Buccaneer Hotels, Galveston, Texas.

May 1-3—Kansas Medical Society. Broadview Hotel, Wichita, Kansas.

May 8-10—Louisiana State Medical Society. Hotel Roosevelt, New Orleans, Louisiana.

NATIONAL

Apr. 10-12—American Academy of Pediatrics. Sheraton-Park Hotel, Washington, D.C.

Apr. 19-21—American College of Surgeons. John B. Murphy Memorial Auditorium, Chicago, Illinois.

Apr. 21-28—American College of Obstetricians and Gynecologists. Americana Hotel, Miami Beach, Florida.

May 2-3—American Pediatric Society. Hotel Traymore, Atlantic City.

May 8-12—American College of Physicians. Americana Hotel, Miami Beach, Florida.

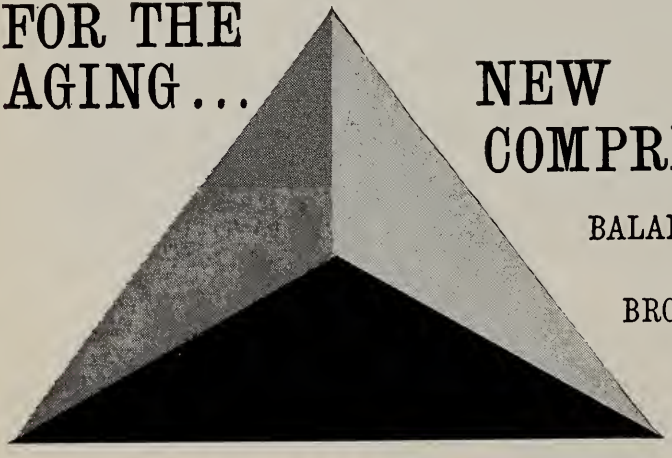
May 22-25—American Urological Association, Inc., Biltmore Hotel, Los Angeles.

June 12-14—American Neurological Association. Hotel Claridge, Atlantic City.

June 22-23—American Rheumatism Association. Hotel Roosevelt, New York City.

June 22-26—American College of Chest Physicians. Hotel Commodore, New York City.

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APRIL 1961
Volume 54 Number 4

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Editorials

May 7, 8, 9 at Tulsa

There are many, many questions that one would like to have some inkling of the answer. Medicine is an exciting venture for all of us. New things, new concepts, new ideas are coming so fast that often we are not sure we are thinking the right way or doing the right things. This is an appeal to two groups of us—an appeal to attend the state meeting and make it mean something to a lot of people. One of these groups is made up of men who have a particular interest and who will keep well informed on progress and ideas in their field. The other are those who are spread thin either because of a very general interest or because of limitation of time. A few minutes chat over a Coca-Cola could bring excitement, interest and new concepts to the latter, and an increased sense of usefulness and purpose to the former. After all, the thinkers and teachers in medicine must get their wares to the purveyors or their lives are sterile and passed in a vacuum. A personal chat has a warmth and a stimulating quality that does not exist in groups with a podium at the center.

Would you be interested in knowing about any of the following?

1. The range and scope of fluorescent microscopy and fluorescent antibody techniques and studies.

2. The diseases now known to be due to man's producing antibodies against his own tissue, so-called autoantibodies.

3. The clinical findings that suggest a patient's hypertension may be due to a lack of, or inadequate blood supply to a partim of a kidney (Goldblatt) and how this possibility can be investigated.

4. The technique of getting the heart going in cardiac arrest without slicing the chest open with a scalpel or razor blade, depending on where it happens.

5. The desirability and feasibility of doing open-heart operations on small infants with serious defects who are not going to make the grade.

6. The incipient symptoms and signs of dementia praecox so that confirmation can be secured and early treatment instituted.

7. The early signs of inadequate blood supply to the brain as well as the extremeties and what, if anything, can be done about it.

8. When, how and if patients who react positively to tuberculin should be treated with antituberculosis drugs.

9. Complete suppression of activity of the thyroid gland in certain cases of carcinoma of the thyroid.

10. How to prevent amblyopia.

11. What to do about the undescended testicle.

12. Protein losing gastroenteropathy.

Attendance at the annual meeting should not be determined by whether or not the formal program involves one's particular interest in medicine or who the speakers are. While the possibilities for straightening out one's thinking are unlimited, one should not think only of what can I get, but *what can I give.* Only a little inquiry will lead to the help one needs, shyness does not become the seeker or aloofness the sought—nor should fear of appearing uninformed or even stupid be a deterrent. The purpose is not to make an impression but to learn. There is no better way to do it short of taking formal courses.

Advantageous Alliance

The generally accepted idea of the American Cancer Society is that it is "just another fund-raising, educational organization." In the most realistic and intelligent judgment of the writers this is a gross misinterpretation.

The American Cancer Society, with its two and a half million volunteers does conduct a program of public and professional education, but is also expending time and energy in two other fields of great importance to physicians. These programs of Service to Cancer Patients and Scientific Research receive far less attention than they merit—yet depend entirely upon the Annual Cancer Crusade for funds for their existence.

At all levels of organization, local, state, and national ,the American Cancer Society operates *only* with the advice, guidance and approval of representatives of the medical and scientific profession. The Oklahoma Division of the Society works in close cooperation with the Cancer Committee of the State Medical Association and with the county medical societies of Oklahoma.

The Service program of the American Cancer Society is giving direct assistance to the patients of practicing physicians. These services include assistance in purchase of certain pain-relieving drugs for the medically indigent patient; supplying surgical dressings to any cancer patient, regardless of financial circumstances; and the loan of hospital beds, wheel chairs and sickroom equipment for patient care at home. These services are provided *only* upon the authorization of the attending physician. In Oklahoma County alone this past year—55 patients received drug assistance, 69 patients were loaned equipment and 218 patients received surgical dressings. Physicians are urged to contact the American Cancer Society regarding these services for their cancer patients.

State researchers are receiving tremendous support from the American Cancer Society's research program. The Oklahoma Division's allocated research funds are pooled with those of other Divisions for more efficient, effective expenditure. The research grants are made from these pooled funds by a nationally coordinated Research Committee. As of March 1, 1961, the Society has a total of $196,118.00 in effect as research grants in Oklahoma. With the exception of $26,437.00 granted to scientists at Oklahoma State University, Stillwater, this total amount is being used by scientists at the Oklahoma Medical Research Foundation and the University of Oklahoma School of Medicine.

The American Cancer Society is *not* a participant of the United Appeals. They will be making an independent Crusade for funds in April. The minimum goal for Oklahoma County for all programs of public and professional education, service to patients and research is $83,000.00. This goal is exactly $819.00 less than the additional, new research grants made to the Oklahoma Medical Research Foundation on March 1, 1961.

Because of the Society's close cooperation with the medical profession and its continued effort to work with the physician to control cancer and assist his patients—we strongly urge the members of the Oklahoma State Medical Association to support the April Fund Raising Crusade. Adequate support of the American Cancer Society will continue and increase the assistance we are now receiving.—Oklahoma County Medical Society Cancer Committee

PRESIDENT'S LETTER



The value of officers who are elected to state and national Medical Associations for one year terms is somewhat fleeting. A man elected has usually come up through various committee or council appointments and serves his year as President more or less as a reward. He is divested of authority and influence once his year in office has ended. The real continuing work in these organizations is carried out by the committees and councils and employed individuals who continue in their positions year after year.

We see this in effect at the present time in the American Medical Association where Doctor Blasingame is more and more the spokesman for the organization, with the elected president being granted full respect of his office but necessarily regarded as a temporary authority. It is inevitable that we must have continuity in the executive branch of the AMA or our own State organization.

In the Oklahoma State Medical Association, Dick Graham, the Executive Secretary, has successfully walked the tightrope between twenty odd different elected presidents and the shifting committee and council personnel, to contribute more than any other one person to maintaining of balance in this organization. Don Blair is successfully continuing this effort.

There is now being evolved in our Association a change in the executive structural setup which will align it with the structural organization of the American Medical Association, wherein five separate Councils are named with a Chairman of each, and various committees under each Council are set up with their various chairmen. This was proposed by Doctor Mohler in his Council report of 1959 and was adopted by President Alfred Baker as a trial for that year and continued in operation this past year. It lends some permanence to the governing sections of the Association that was difficult to maintain previously. The Councils presumably maintain some degree of stability from year to year with less frequent change in makeup than would be the case under a host of committees. It is increasingly apparent to me, in serving as President of this Association, that some carry-over in appointments must be maintained from year to year. Even a Dick Graham, or the personable Don Blair, needs an occasional helping hand on the administrative side.

Walter E. Brown, M.D.

WALTER E. BROWN, M.D.
President

Scientific Articles

The Successful Use of Cardiac By-Pass in the Correction of Congenital Heart Lesions in Infants and Small Children

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PUBLISHED REPORTS indicate that the use of cardiac by-pass in the surgical correction of congenital heart lesions is associated with a much greater risk in the infant and small child than in older children.[1,2,3,4,5] The higher mortality has been attributed to three major factors:

1. Difficulty in accurately controlling blood volume and in obtaining an adequate perfusion rate.[6]
2. Poor tolerance to ventriculotomy.
3. Frequent and severe pulmonary complications in the post-operative period.[7]

Encouraged by the ease of perfusion and the good results of by-pass procedures in several small, seriously ill, older children with congenital heart disease, the correction of a group of carefully selected infants and small children was attempted by the heart team at the Children's Memorial Hospital, University of Oklahoma Medical Center. Our experience with these younger patients is presented in this report.

Patients and Results

During the past 1½ years, 16 children under the age of three years with congenital heart disease have had surgical correction with the use of the cardiac by-pass technique (table 1). Five children were between the ages of nine weeks to one year, four between one and two years, and seven between two and three years. The weights ranged from 6.8 pounds to 36 pounds with a mean of 21.6 pounds. The various cardiac lesions represented by this group included: atrial septal defect, one case; ventricular septal defect, seven cases (one had an associated atrial septal defect); AV communis, two cases; aortic stenosis, one case; pulmonary stenosis, two cases; total anomalous pulmonary venous drainage, one case; and transposition of the great vessels, two cases. The first patient in this group was operated on in April, 1959 and the last, October, 1960. Post-operative follow-up periods range from three weeks to 18½ months.

*Doctor Ryan is an NIH Trainee in pediatric cardiology.

**Doctor Cayler is an Advanced Research Fellow of the American Heart Association.

This paper is from the Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City.

AGE	WEIGHT		DIAGNOSIS							TOTAL
	MEAN	RANGE	ASD	VSD	AV COMM	AS	PS + ASD	TAPVD	TRANS	
<1 YR.	13.5	6.8:21		2				1	2	5
1-2 YRS.	23.5	22:24		1	2		1			4
2-3 YRS.	26.4	21:36	1	4*		1	1			7
TOTAL	21.6	6.8:36	1	7	2	1	2	1	2	16

*1 + ASD

TABLE 1—Summary of Patients' Ages, Weights and Diagnoses

Of the seven patients with VSD, three had additional structural cardiac lesions, a patent ductus arteriosus, an atrial septal defect and infundibular pulmonary stenosis (table 2). All had cardiac enlargement of moderate to marked degree. Six patients had either physical signs or a history of congestive heart failure. Five of the seven patients had growth retardation, five had pulmonary artery hypertension, and three had increased pulmonary vascular resistance. The surgical results are considered good in all of these patients, although two still have persistent grade III murmurs. One of these two patients had immediately post-operatively a significant increase in oxygen saturation from the right atrium to the right ventricle. None have been restudied by cardiac catheterization.

The single patient with a secundum ASD had marked cardiac enlargement, congestive heart failure and growth retardation (table 3). The two patients with pulmonary stenosis had cardiac enlargement, congestive heart failure, severe stenosis, and moderate sized right-to-left shunts through associated atrial septal defects. Patient S.R. also had hypercyanotic spells. The child with aortic stenosis had dyspnea, decreased exercise tolerance and had had one episode of syncope. His EKG revealed left ventricular hypertrophy and T wave changes. The surgical results were all excellent in this group.

The infants with transposition, total anomalous venous drainage and AV communis were the most severely ill patients of the group reported (table 4). All five had congestive heart failure, cardiac enlargement of marked to moderate degree and growth retardation. Three, all of whom had lesions not amenable to complete surgical correction, expired. Of the remaining two patients, the child with total anomalous pulmonary venous drainage had a good surgical result but the child with partial AV communis defect has a persistent grade III murmur of mitral regurgitation.

Pre-operative hemodynamic data and immediate post-operative pressures and saturation measurements are listed in table 5. The post-operative data on all but two of the patients with atrial, ventricular, or communis defects evidenced essentially complete closure. The patients with stenotic lesions

TABLE 2—Clinical Data—Patient with ventricular defects (PAH = pulm. art. hypertension; CHF = congestive heart failure; FTT = failure to thrive; CE = cardiac enlargement)

PATIENT	AGE	WEIGHT	BSA	COMMENT	SURGICAL INDICATIONS	SURGICAL RESULT
1. J.W.	11 MOS.	14#	0.33	PDA + PAH	CHF, FTT, CE	? GOOD GR. 3 MURMUR
2. D.B.	11 MOS.	21#	0.42	PAH	CHF, CE	GOOD NO MURMUR
3. R.C.	2 YRS.	20#	0.42	PS	CHF, FTT, CE	GOOD GR. 1 MURMUR
4. D.R.	2½ YRS.	21#	0.40	PAH	CHF, CE, FTT	GOOD GR. 1 MURMUR
5. W.J.	3 YRS.	24#	0.50	PAH	CHF, CE, FTT	? GOOD GR. 3 MURMUR
6. C.S.	3 YRS.	24#	0.48	PAH + ASD	CHF, FTT, CE	GOOD GR. 2 MURMUR
7. P.L.	3 YRS.	36#	0.80		CE	GOOD NO MURMUR

PATIENT	AGE	WEIGHT	BSA	COMMENT	SURGICAL INDICATIONS	SURGICAL RESULT
1. B.V.	2½ YRS.	24#	0.49	ASD 2°	CHF, FTT, CE	GOOD NO MURMUR
2. S.H.	2 YRS.	23#	0.48	PS + ASD	CHF, SEVERE STENOSIS	GOOD GR. 2 MURMUR
3. S.R.	3 YRS.	26#	0.52	PS + ASD	CHF, SEVERE STENOSIS	GOOD GR. 2 MURMUR
4. K.L.	3 YRS.	30#	0.59	AS	CE, SEVERE STENOSIS	GOOD GR. 2 MURMUR

TABLE 3—Clinical Data—Patients with atrial defects, pulmonary stenosis and aortic stenosis.

PATIENT	AGE	WEIGHT	BSA	COMMENT	SURGICAL INDICATIONS	SURGICAL RESULT
1. J.J.	9 WKS.	6# 6 oz.	0.19	TRANS	CHF, FTT, CE	EXPIRED
2. J.H.	11 MOS.	13# 14 oz.	0.39	TRANS	CHF, CE, FTT	EXPIRED
3. C.M.	11 MOS.	12#	0.29	PV→CS	CHF, CE, FTT	GOOD NO MURMUR
4. C.M.	2 YRS.	22#	0.49	PARTIAL AV COMM	CHF, CE, FTT	? GOOD GR. 3 MURMUR
5. C.M.	2 YRS.	23½#	0.49	COMPLETE AV COMM	CHF, CE, FTT	EXPIRED

TABLE 4—Clinical Data—Patients with transposition and atrioventricularis communis (PV→CS = pulmonary veins entering coronary sinus)

		PRE-OPERATIVE								POST-OPERATIVE		
		SYSTEMIC ARTERIAL				VENTRICULAR SYSTOLIC PRESSURE				PRESSURE		
PATIENT	DIAGNOSIS	Qp/Qs	O_2 SAT	PA	PVR	R→L	RIGHT	LEFT	SEMILUNAR VALVE AREA	Qp/Qs	VENTRICULAR	ARTERIAL
1. J.W.	VSD+PDA	3.5:1	90.7	42	1.4	—	74	100	—	3:1	—	100
2. D.B.	VSD	3:1	90.2	30	1.0	—	60	90	—	1:1	20	90
3. R.C.	VSD+PS	3:1	95.1	18	0.7	—	44	127	—	1:1	20	110
4. D.R.	VSD	2.5:1	94.0	36	6.6	—	68	112	—	1:1	40	100
5. W.J.	VSD	4:1	95.4	63	4.0	—	84	117	—	1.4:1	20	100
6. C.S.	VSD+ASD	5:1	92.6	57	3.3	—	90	90	—	1:1	40	100
7. P.L.	VSD	2:1	98.7	15	0.6	—	30	94	—	1:1	—	90
8. B.V.	ASD 2°	3.5:1	94.0	14	0.8	—	35	100	—	1:1	—	100
9. S.H.	PS—ASD	—	82.0	—	1.0	22%	104	105	0.14 cm_2 (4 mm)	1:1	60	120
10. S.R.	PS+ASD	—	60.2	—	1.4	63%	120	105	—	1:1	34	120
11. K.L.	AS	—	97.8	15	0.8	—	100 Ao	170	0.31 cm_2 (6 mm)	—	90 Lt.	90
12. J.J.	TRANS	3:1	56.9	—	0.7	63%	72	63	—	—	— EXPIRED	
13. J.H.	TRANS	3:1	63.5	—	0.2	80%	96	93	—	—	— EXPIRED	
14. C.M.	TAPVD	7:1	30.6	17	0.4	29%	46	89	—	—	—	90
15. C.M.	AV COMM	4.6:1	97.5	22	0.9	—	42	114	—	1:1	—	96
16. C.M.	AV COMM	3.5:1	96.5	—	4.4	—	90	105	—	2.5:1	— EXPIRED	

TABLE 5—Cardiac catheterization data and immediate post-operative measurements

showed no significant residual aortic or pulmonary pressure gradients post-operatively.

It is of interest that there were no major post-operative complications in the 13 children who survived. They were responsive in the operating room, were taking oral fluids within 12 hours and all tubes had been removed within 48 hours. Their post-operative course was generally more benign than that of our older children.

The by-pass apparatus used at our hospital consists of a Kay-Cross rotating disc oxygenator and DeBakey pump. The infant oxygenator is small (9 inches) and can be primed with as little as two units of blood (figure 1). Figure 2 is a schematic representation of the pump oxygenator ready for use.

Discussion

During the operative procedure we consider it important to maintain constant monitoring of the EKG, EEG and systemic arterial pressure. The post-operative weight change is also closely measured on a very sensitive scale. When the pump oxygenator was first used we also determined the post-operative arterial pH, plasma hemoglobin, and arterio-venous oxygen differences. We do not consider constant monitoring of these parameters to be necessary during perfusion. We think that it is very important that the heart always be vented when the aorta is cross clamped and that myocardial

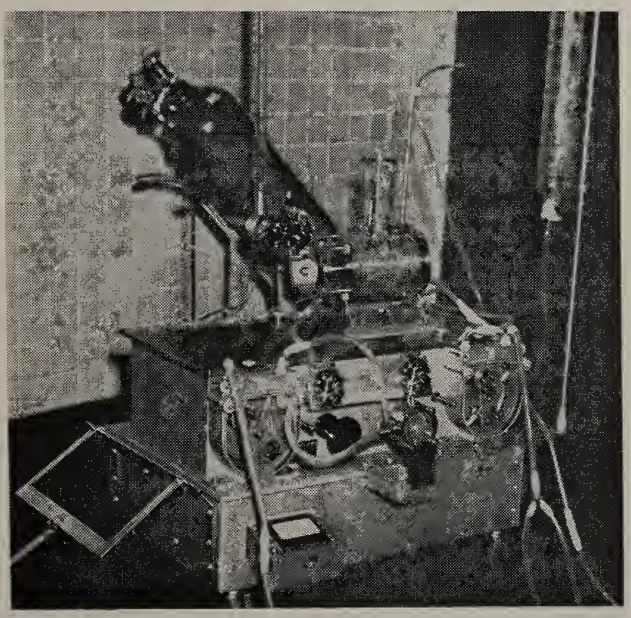


Figure 1—Infant Kay-Cross Cardiopulmonary By-Pass Apparatus

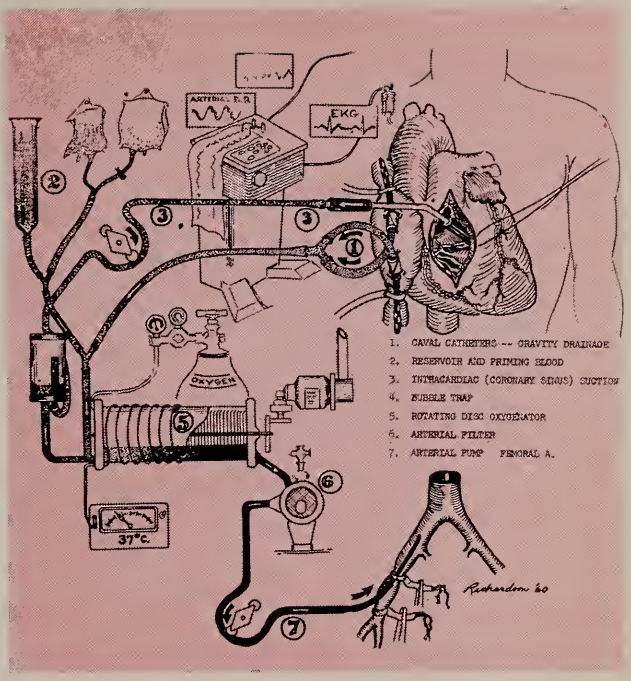


Figure 2—Schematic Representation of Cardiac By-Pass and Monitoring Apparatus

anoxia never exceed five minutes. After five minutes of aortic occlusion, the aortic clamp is removed and coronary perfusion re-established for one-two minutes. Successive five minute periods of aortic occlusion are repeated as dictated by the time required to correct the intracardiac lesions.

Total body perfusion is initiated at 2,000 ml/min./m^2 which is equivalent to a rate of approximately 100 ml/KG/min. for an infant. Adjustments are made on the basis of caval return and the systemic arterial pressure. Since caval return is the limiting factor in maintaining an adequate perfusion, large (#20-28 French) caval catheters have been used. Arterial return has been accomplished through short #10-14 French catheters placed in the common femoral artery. Total perfusion time in most cases was less than 30 minutes and the total operating time between two-three hours (table 6). Immediate post-operative adjustments in blood volume are made on the basis of systemic arterial pressure and change in body weight.

Comparison of our experience in this small group of infants and younger children with the results obtained in children between the age of 4-15 years reveals no significant difference in mortality or surgical result (table 7). We have been impressed with the low post-operative morbidity in the infants and small children.

LESION	#	WEIGHT IN POUNDS	PERFUSION TIME MIN.	TIME AO CROSS CLAMPED MIN.	PERFUSION RATE ML/MIN/M_2	PERFUSION PRESSURE MM Hg	TOTAL OP TIME MIN	COMMENT
VSD + ASD 2°	8	23 (14-36)	29.1 (10-37)	2.6 (0-18)	2100 (1400-3600)	62 (40-90)	167 (125-210)	W.J. Transient EEG changes which disappeared with increased flow P.L. Transient complete heart block-converted with $NAHCO_3$
AV COMM + TAPVD	3	29.7 (26-33)	24 (15-37)	4.3 (0-7)	2800 (1700-3500)	73 (50-110)	148 (160-265)	C.M. Block with final atrial suture relieved by suture removal
PS+ASD + AS	3	19.1 (12-23.5)	34.7 (19-45)	8.7 (0-4)	1800 (1500-2100)	62 (60-64)	190 (156-235)	Good Perfusion
TRANS	2	10.1 (6.8-13.9)	96.5 (89-104)	10.5 (0-21)	3000 (2300-3700)	65 (50-80)	233 (210-257)	J.J. Cannula placement poor J.H. FV & AV cannula
TOTAL	16	21.6 (6.8-36)	44.3 (10-104)	6.2 (0-21)	2400 (4100-3700)	65 (40-110)	184 (160-265)	

TABLE 6—Summary of perfusion data.

Summary

It has been our experience that the mortality of cardiac by-pass surgery for infants and small children with lesions amenable to complete surgical correction is as low as for older children. The post-operative morbidity of these smaller patients has been lower than that of the larger children. A pump-oxygenator with a low priming volume permits more precise blood volume control during perfusion. Adequate perfusion rates are possible in these small patients through the use of maximal sized arterial and venous cannulae. Rapid post-operative blood volume adjustments based on systemic arterial pressure and later on precise weight change measurements have proved to be effective and accurate.

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	ASD 2°	AV COM.	VSD	AP FEN.	AS	PS	TOF	TRANS	TAPVD	TOTAL
4-15 Years										
#	8	2	10	1	12	9	8			50
Surg. Death	0	0	1	1	0	0	1			3 (6%)
Late Death	0	0	1	0	1	1	1			4 (8%)
Good Corr.	8	2	7	0	10	9	6			42 (84%)
<3 Years										
#	1	2	7		1	2		2	1	16
Surg. Death	0	1	0		0	0		2	0	3 (19%)
Late Death	0	0	0		0	0		0	0	0
Good Corr.	1	1	7		1	2		0	1	13 (81%)

TABLE 7—Surgical Results of Cardiac By-Pass Procedures 1958-1960

Have you a patient who is suffering mental, personality and functional anguish because of a jaw mal-formation? These can now be successfully corrected.

Bilateral Sliding Osteotomy (Indirect Technique) For Correction of Protruding Jaw

Report of a Case

DON D. COHLMIA, B.S., D.D.S.

KENNETH Wm. SHONS, B.A., D.D.S., M.S.D.

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Doctor Cohlmia is a member of the American Dental Association and Delta Sigma Delta.

Since graduating from the University of Kansas City School of Dentistry in 1955, Kenneth Wm. Shons, B.A., D.D.S., M.S.D., has been certified by the Oklahoma Dental Specialty Board. He is Instructor in Oral Surgery, his specialty, at the University of Oklahoma Medical Center.

PROGNATHISM is a developmental deformity of the jaw producing a mal-relationship of the lower jaw to the upper jaw. Not only is the appearance affected but in most cases, there is also a functional debility, a mal-occlusion which prevents proper function of the teeth and mastication of food. According to classification, a "True Mandibular Prognathism", is one in which the maxillae is normal but the length of the mandible is increased. It is associated with a reversed incisor overbite, that is, an abnormal condition in which the mandibular incisors are anterior to the maxillary incisors. This condition may be associated with acromegaly, caused by hyperpituitarism and in other instances, prognathism is inherited. The famous Hapsburg jaw shows the strong hereditary character of this condition.

Mandibular ostectomy or osteotomy is the only treatment in which a "True Mandibular Prognathism" can be corrected. The operations recommended may be classified according to the anatomical location where they are performed. These are the ascending rami, the horizontal rami and the neck of the condyles. There are also variations in techniques, some utilizing an extra-oral approach, others prefer an intra-oral procedure, or a combination of the two, performed either simultaneously or as two separate operations. The surgical approach for the correction of prognathism is determined by (a) the condition of the teeth and their occlusal relationship, (b) the number of teeth present, (c) the extent of mandibular protrusion and (d) the esthetical result anticipated.

The following case report illustrates a bilateral mandibular osteotomy for correction of a "True Prognathism", utilizing the indirect technique by the extra-oral approach.



Figure 1

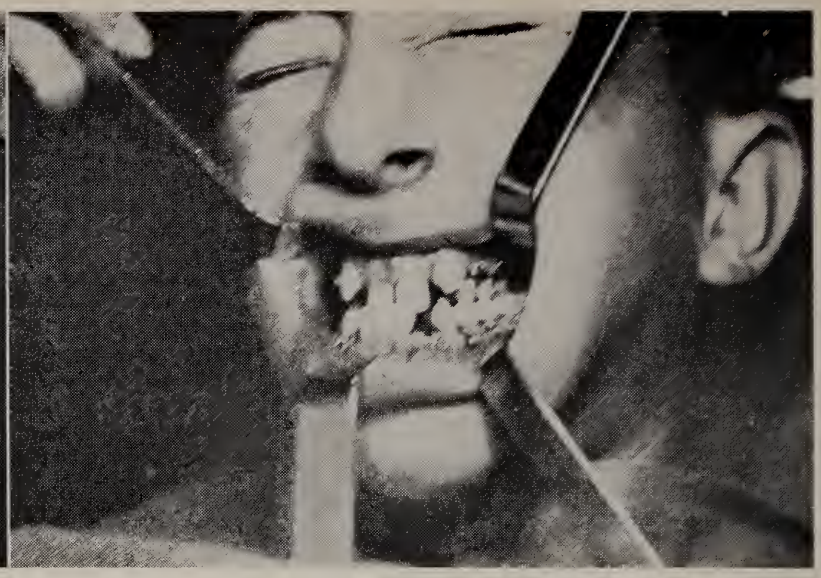


Figure 2

Case Report

R. R., a 14 year old white male came to the Oral Surgery Clinic, University Hospitals, Oklahoma City, Oklahoma, on October 19, 1960, for evaluation and studies of a protruding jaw (figure 1).

During the clinical examination, it was found that the patient had an extreme malocclusion due to a definite protrusion of the mandible. The anterior mandibular teeth protruded approximately 6 mm. in front of the anterior maxillary teeth. The maxillary and mandibular teeth were mal-positioned as seen in figure 2. Lateral jaw roentgenogram (figure 3) shows the maxillary second molar distal to the mandibular second molar, therefore, causing the reversed incisor overbite; the condition seen photographically in figure 2. The patient stated that he had had difficulty masticating for the past six years and at times chewing became painful in the area of the temporomandibular joints. The patient had become more self-conscious of his abnormality with increasing age, and consequently a personality problem was developing. Impressions of both maxillary and mandibular arches were

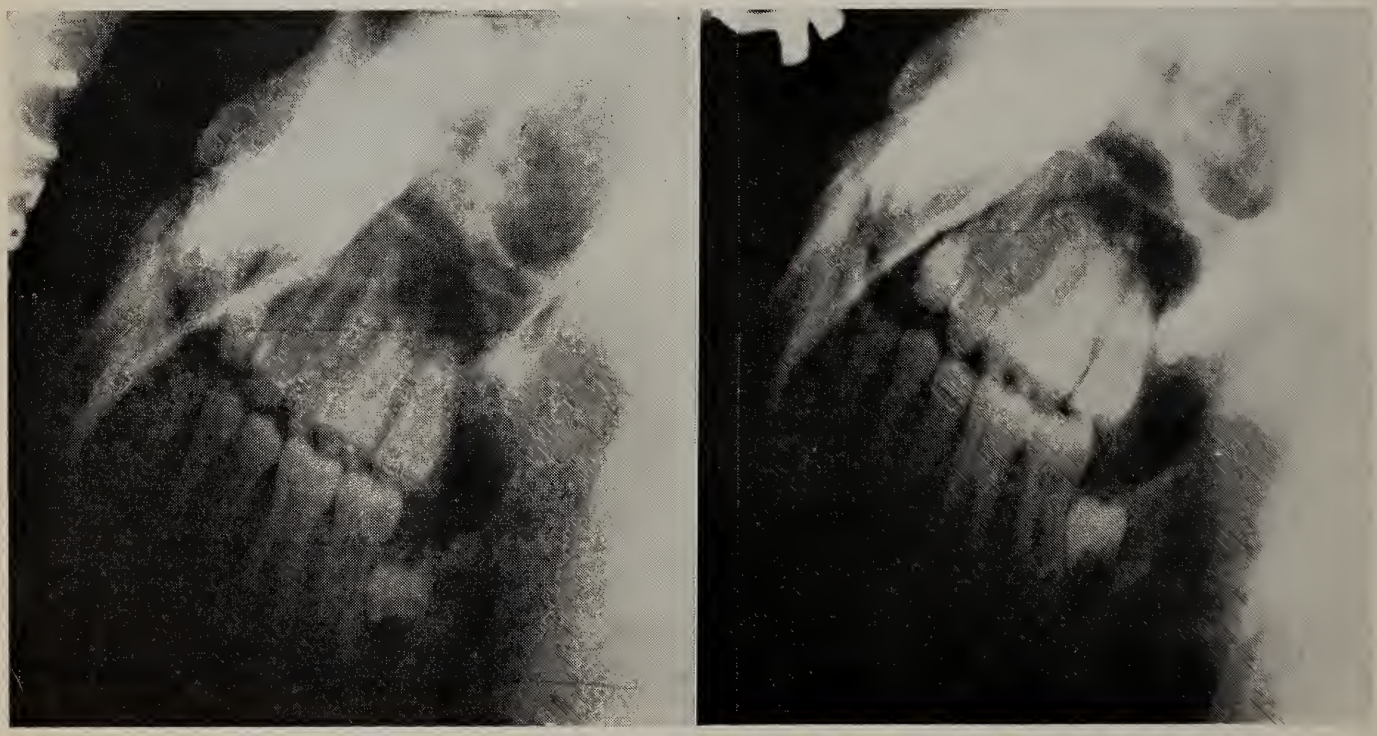


Figure 3

taken, and study models were made from the impressions. Manipulation of the models enabled us to approximate the anticipated occlusion of the teeth post-operatively. Cephalometric roentgenographic studies were obtained and by means of angles and planes, deviation of the facial structures from their normal were determined and anticipated corrections were made. Skull and jaw roentgenographic examination showed good bone development and a normal sella turcica. After a thorough study, we decided the prognathism could be corrected surgically by the indirect technique.

The patient's past history was essentially negative. He had had no serious illnesses nor history of previous operations.

Physical examination revealed a well developed, well oriented white boy in no acute distress with both physical and laboratory findings within normal limits.

On November 18, 1960, under pre-medication and local anesthesia, Stout's multiple loop wires were applied to the maxillary and mandibular posterior teeth. Three lateral incisors were extracted due to a crowding of these teeth from their proper alignment.

Two days later, under general anesthesia, naso-tracheal intubation, a sliding osteotomy was done. The first incision, approximately 6 mm. in length, was made inferior and posterior to the angle of the mandible. By blunt dissection the mandible was then located. A wire carrier was inserted through this incision and through the periosteum and guided along the medial aspect of the ramus of the mandible. The tip of the carrier was kept in contact with the bone until the sigmoid notch was reached. It was then passed upward toward the skin. The second incision was made where the wire carrier protruded the skin. A Gigli saw was then attached to the carrier and drawn back through the first incision. Ear speculums were placed at each incision to protect the soft tissues (figure 4). The bone was then sectioned with the Gigli saw by using short strokes. This same procedure was performed on the opposite side. After sectioning both the right and the left sides, the mandible was moved posteriorly with the condylar

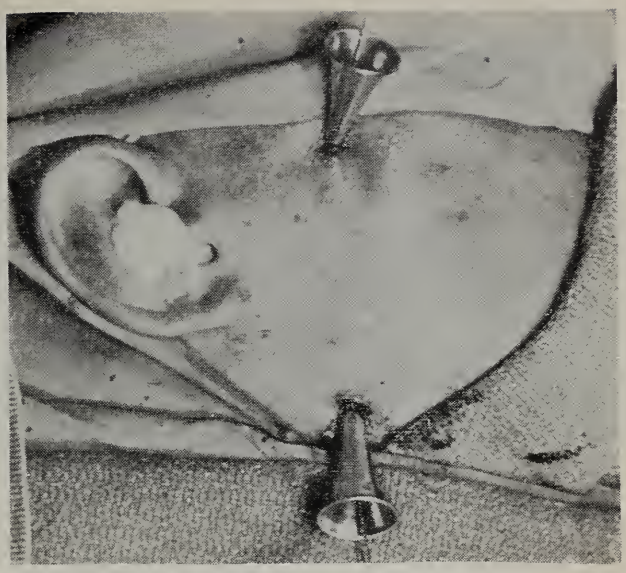


Figure 4

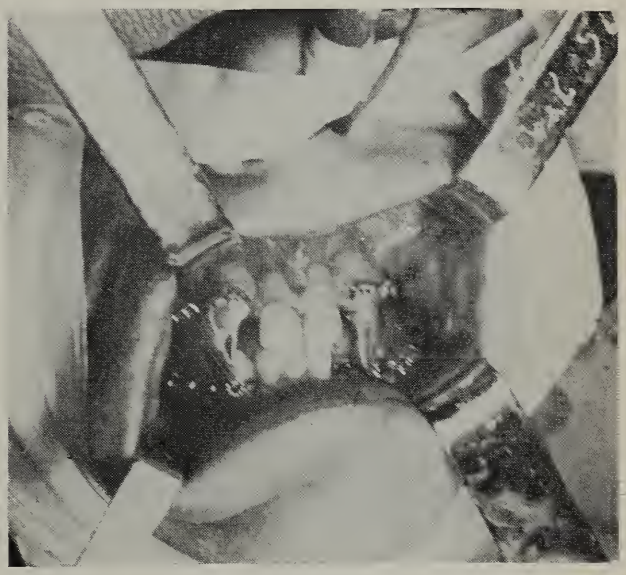


Figure 5

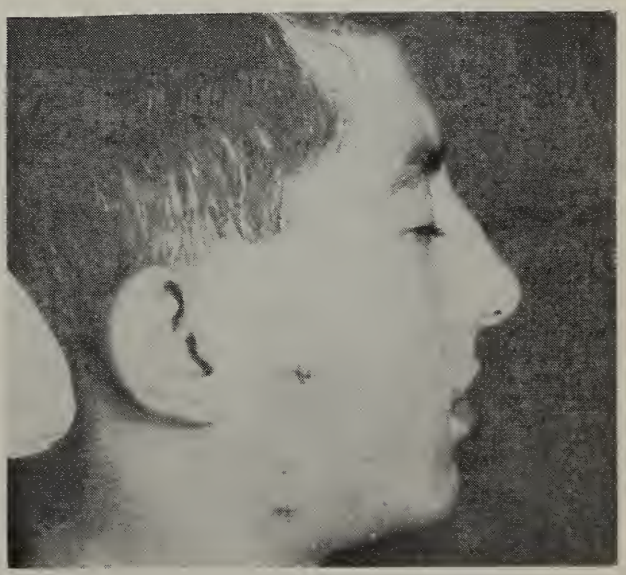


Figure 6

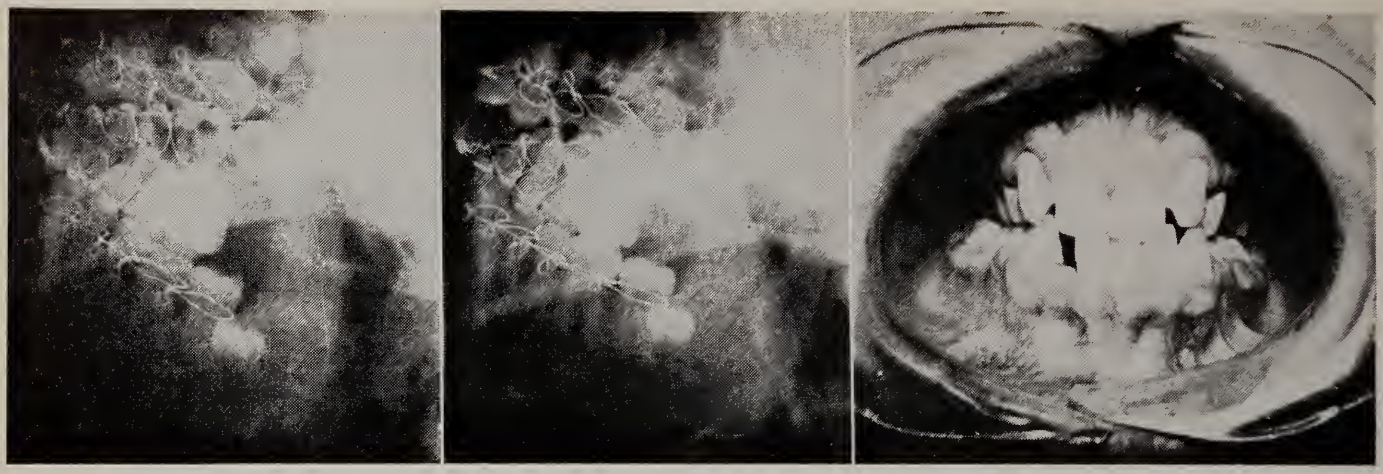


Figure 7

Figure 8

segments lying medial to the ramus. Intermaxillary elastic traction was applied to the previously placed Stout's multiple loop wires (figure 5). The chin was now in a normal position with the mandibular teeth posterior to the maxillary teeth. There was minimal hemorrhage during the operation and no apparent hemorrhage post-operatively.

The post-operative course of the patient was uneventful. On the third day following the operation, edema was minimal and the skin sutures were removed (figure 6). Post-operative lateral jaw roentgenogram (figure 7), shows the mandibular posterior teeth in normal occlusion with the maxillary posterior teeth. The vertical cuts along the ascending ramus with overlapping of bone, which allowed the mandible to be moved posteriorly to its normal position, can be visualized.

The patient was seen in the Oral Surgery Out-Patient Clinic once a week. The elastics were removed and he was allowed to brush his teeth thoroughly during each clinic visit. The number of elastics reapplied was reduced each week. Figure 8 shows three month post-operative occlusion, following removal of elastic traction and Stout's multiple loop wires.

The appearance, occlusion, and personality of the patient were greatly improved.

Summary

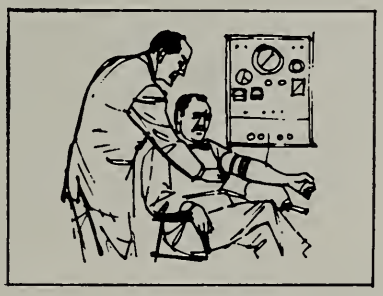
A case is reported which describes an indirect technique for an osteotomy of the ascending ramus to correct a mandibular prognathism. Two main advantages of this indirect technique are:

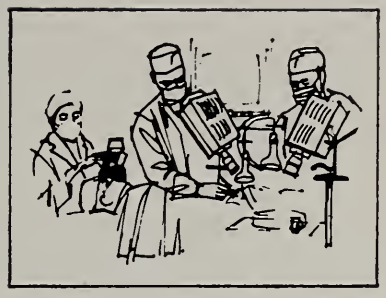
1. There is very little post-operative edema and scaring, since the traumatic aspect of the procedure is minimal and the incision sites are extremely small.
2. The entire procedure is completed in one operation in contrast to the prolonged two stage technique, requiring two separate operations.

This procedure was successfully carried out with no post-operative complications. The results obtained were esthetically satisfactory with marked improvement in personality and masticatory functions.

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Physical Findings Associated with Ventricular Aneurysm

JAMES K. DOWLING, M.D.

Introduction

The Journal is joining the Oklahoma State Heart Association in presenting each month, in brief form, pertinent information on heart disease, its management, its understanding, and its prevention. The material will be assembled by Doctor Thomas N. Lynn of the Department of Medicine, University of Oklahoma Medical Center. The editors of the Journal will welcome your comment.

The first authentic case of cardiac aneurysm was reported by Hunter in 1757, and Remlinger in 1896 was the first to diagnose the condition during life on the basis of a musical to-and-fro murmur. Until 1926 only six cases had been diagnosed *ante mortem*.

The diagnosis of ventricular aneurysm rests on a previous history of myocardial infarction. The most common sites of infarction include the apex and anterior wall of the left ventricle and the ventricular septum.

One of the most outstanding, though inconstant physical findings is the presence of an abnormal cardiac pulsation in an unusual position. In most cases this pulsation is visible and palpable medial and cranial to the apex beat or appears as a "medial" apex beat well inside the area of cardiac dullness. The impulse is systolic in time. Vakil describes the character of the pulsation as varying from a systolic thrust in the mesocardial region to a heaving pulsation of the whole precordium; in some cases it consists of a wavy systolic retraction of the intercostal spaces at the site of the aneurysm or a large, forceful and remarkably wide cardiac thrust in the vicinity of the left MCL and usually on a level with the fifth rib. He further describes a slowness of lag of the up-and-down movement of the chest wall with each beat, especially the downward movement. The pulsation may appear within six days of myocardial infarction and soon reaches its maximum intensity. Sometimes it disappears as the connective-tissue scar develops and shrinks, but ordinarily it persists for life.

Weak peripheral pulses and distant heart sounds frequently accompany aneurysm. Levine and Harvey describe a diminished or muffled first heart sound, and McKusick describes an early or midsystolic click which he attributes to the expansion of the aneurysm in early systole, occurring at the same time as a palpable impulse in a localized spot at the apex. Coincident with inspiration, this systolic sound decreases or disappears, and returns with expiration. It is thought that this sound corresponds to a paradoxical systolic bulge or expansion of the localized aneurysm striking against the chest wall. Whether this sound is present will depend upon the location of the aneurysm, the extent of involvement and the vigor of ventricular systole.

Both systolic and diastolic murmurs have been described in patients with ventricular aneurysm; however, recent series dealing with large numbers of cases specifically mention the absence of abnormal murmurs. Gendrin, Paul and Remlinger describe systolic and diastolic murmurs in patients with ventricular aneurysm in the absence of demonstrable valvular abnormality. It has been found that the murmurs may gradually decrease in intensity, presumably because the aneurysm is filled with thrombi. In five of 20 of Vakil's cases a fairly long and loud systolic murmur was heard with a peculiar cooing, plaintive or musical character, occupying the whole of systole and early part

(Continued on Page 219)

MEDICAL CENTER

Message from the Dean

In July of this year, the University of Oklahoma Speech and Hearing Center officially became a part of the University of Oklahoma Medical Center. The Center is devoted exclusively to the diagnosis and treatment of children and adults with speech and hearing problems. With the completion of the new wing, now in the process of construction, the Center will be one of the largest and most modern facilities of its kind.

The Center conducts a large clinical program, offering its services to the Department of Public Welfare, Vocational Rehabilitation, and Veterans Administration, as well as to private individuals in the state of Oklahoma. Through the Department of Communication Disorders it also presents an outstanding graduate program for students who wish to obtain either an M.Sc. or Ph.D. degree in the areas of speech pathology, audiology, and teaching the deaf. The faculty of the department is composed of staff members in the Center who hold Graduate College appointments.

The increasing number of high caliber graduate students in the program, as well as the additional floor space and improved facilities provided in the new wing, will make possible an expansion of the research program. Having recently completed one investigation supported by the U.S. Office of Education, the Center is now in the second year of a research project under the auspices of the Department of Vocational Rehabilitation.

Clinical aspects of this Center embrace a wide variety of activities in addition to routine therapy. Staff members from the Center participate on a cleft palate team in the hospital in which rehabilitative planning for patients is by persons representing such disciplines as plastic surgery, pediatrics, orthodontia, prosthodontia, etc. A special speech therapy program for cerebral palsied children supported by the Oklahoma City Chapter of United Cerebral Palsy is conducted in the Center. Once each week a special diagnostic clinic is held to study patients who present unusual otologic and audiologic problems. The clinic is under the joint supervision of an otologist and an audiologist. Patients presenting symptoms of eighth cranial nerve of cerebellar-pontine angle tumors, Meniere's disease or other unusual problems in hearing may be referred to the clinic by otologists, neurologists or other physicians throughout the state.

In a day when there is an increased awareness of the needs of the handicapped, and improved recognition of the possibilities for rehabilitation of children and adults alike, the Speech and Hearing Center has much to offer persons who have speech and hearing problems. In few aspects of the general field of rehabilitation is the prognosis for success as good as in these areas.

Careful consideration reveals that a child or an adult suffering from a severe speech and/or hearing problem may be just as crippled as an individual who is orthopedically handicapped. Through its School for the Deaf, its large clinical and diagnostic program in Audiology and Speech Pathology, its research, and parent guidance and education, the Center is making every effort to alleviate the problems of the speech and hearing handicapped. To this end, other departments of the Medical Center are giving their fullest cooperation in providing correct medical diagnosis and treatment.

Mark R Everett

The appearance of a new technique which simplifies cardiac resuscitation is of interest to all physicians. Recent experience at the University of Oklahoma is reported to illustrate the success possible with this new development.

Treatment of Cardiac Arrest by Closed Chest Massage*

G. RAINEY WILLIAMS, JR., M.D.

MICHAEL F. LYNCH, M.D.

A graduate of Northwestern University Medical School, G. Rainey Williams, Jr., M.D., has been certified by the American Board of Surgery and the American Board of Thoracic Surgery. He is Assistant Professor of Surgery at the University of Oklahoma School of Medicine.

Doctor Williams is a member of the Society of University Surgeons, the Southwest Surgical Congress and a Markle Scholar in Medical Sciences.

Michael F. Lynch, M.D., graduated from Tufts University Medical School in 1953. He is now taking a residency in Thoracic Surgery at the University of Oklahoma Medical Center.

He is a member of the American Trudeau Society, Oklahoma Chapter.

Introduction

CLOSED CHEST compression of the heart is an effective method of restoring circulation following cardiac arrest. Simplicity makes this method a significant advance over cardiac massage through open thoracotomy. The purpose of this communication is to report four cases in which closed chest compression of the heart was carried out and to encourage familiarity with this technique.

Report of Cases

Case 1. C. W. (#192-830), a twelve year old colored female developed cardiac arrest while undergoing a minor procedure in a remote area of the Hospital (5 October 1960). For several reasons a long delay ensued and after an estimated nine minutes closed chest cardiac massage was begun. The heart beat was readily restored but there was early evidence of severe brain injury and despite institution of hypothermia this child died four days later, apparently as a result of central nervous system injury.

Case 2. J. L. (#179-412), a fourteen year old white male underwent surgical correction of severe mitral insufficiency on 2 November 1960. Despite a satisfactory repair, cardiac arrest occurred four hours after operation and closed chest massage was begun immediately. Good pulses were palpable while sternal compression was carried out and the effect of sternal compression on blood pressure was measured through an inlying arterial catheter, strain gauge and recorder. Although this boy failed to survive, closed chest resuscitation was effective in restoring heart beat on several occasions.

Case 3. J. R. (#300-212), a 28 year old white female was prepared for bronchoscopy in the Outpatient Department on November 23, 1960. Following transtracheal injection of topical anesthetic agent the patient became cyanotic, respirations ceased and the peripheral pulse disappeared. Closed chest compression was immediately successful in restoring peripheral pulse and after a period of intratracheal respiration, administration of epinephrine, and hydrocortisone, the vital

*From the Department of Surgery, University of Oklahoma Medical Center, Oklahoma City, Oklahoma.

signs returned to normal. The patient promptly regained consciousness and was discharged 24 hours later apparently entirely well.

Case 4. L. N. (#305-566), a 36 year old colored male was admitted to the Hospital on 8 December 1960, 33 hours following multiple gunshot wounds. After a few hours of preoperative preparation, laparotomy with repair of perforations of the bladder and multiple perforations of the small intestine was carried out. The patient's condition remained critical throughout the operative procedure and two hours following operation absence of pulse was noted in the recovery room. Closed chest resuscitation and endotracheal intubation were promptly carried out and heart beat was restored after a very few minutes of chest compression. The patient recovered consciousness slowly and although the postoperative period was stormy, his eventual recovery was satisfactory.

Discussion

The phenomenon of cardiac arrest is of interest to every physician. It is becoming more frequent in occurrence and remains a serious consideration in advising any procedure involving an anesthetic agent. The mechanism by which cardiac arrest occurs is unknown although the recently reported work of Porter and French[1] may well lead to better understanding of this problem. Although considerable data has been accumulated regarding the situations in which cardiac arrest may be expected, the fact remains that cardiac arrest is a ubiquitous catastrophe.

The principles involved in the management of the patient in whom cardiac arrest occurs have been well established for many years. These include first, establishment of an airway and resumption of ventilation of the lungs and second, restoration of circulation. The long established method of restoring circulation has been manual massage of the heart through the open chest. It is well known that the heart beat can usually be restored after circulatory arrest but the limiting factor in survival of the patient is the extent of brain injury. Though subject to a number of variables, it is generally stated that if the circulation is arrested for longer than three to four minutes, fatal brain injury will occur. Obviously, any procedure which will permit rapid restoration of circulation without the necessity of performing open thoracotomy will represent a significant advance in technique. Closed chest compression of the heart appears to furnish an ideal solution to the problem of delaying treatment due to inadequate equipment or relatively untrained personnel. Although restoration of the circulation without opening the chest is not a new idea, great credit should be accorded Kouwenhoven, Jude, and Knickerbocker for their efforts in establishing an experimental and clinical basis for and describing a simple technique by which this can be accomplished.[2] The technique described by these investigators involves placing the hands on the chest of the patient in the manner illustrated in Figure 1. Forceful compression of the chest in an antero-posterior direction with complete release of pressure at a rate of 60 to 90 per minute is begun as soon as the diagnosis of circulatory arrest is made. The criterion of adequate sternal compression is the ability to palpate a peripheral pulse during this maneuver. The following points should be emphasized.

1. The initial consideration in treating a patient after circulatory arrest is restoration of an airway. Closed chest compression produces some ventilation but this is inadequate for resuscitative purposes. Any readily available method of artificial ventilation is suitable.

2. The patient must be on a firm surface such as an operating room table or the floor. Closed chest resuscitation can not be carried out on a yielding surface.

3. Although this method is equally applicable to adults and children a great deal of force may be required in older patients and usually this will involve having the person applying resuscitation well above the patient.

4. The indications for the use of drugs are unchanged from those already existing.

5. In instances where the cardiac arrest is ventricular fibrillation rather than ven-

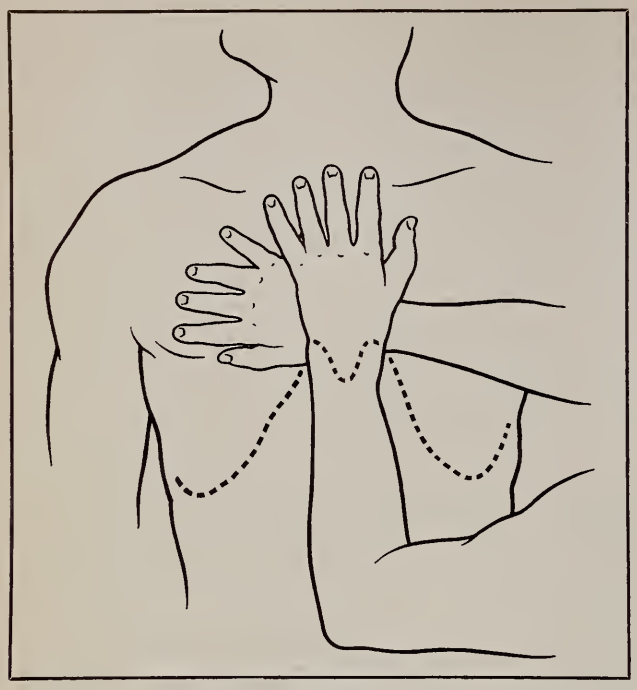


Figure 1. Method of placing hands on chest for sternal compression. Heel of lower hand is over xiphi sternal junction and upper hand is centered over same area.

tricular standstill, electrical defibrillation will be necessary to restore heart beat. The diagnosis of ventricular fibrillation depends, of course, upon the electrocardiogram or direct visualization of the heart. External compression of the fibrillating heart will maintain circulation while the diagnosis is established and while defibrillating equipment is readied.

This method is simple and reliable. There seems to be little reason why it should not be instituted promptly and it is reasonable to promise that considerable improvement in the present mortality rates from cardiac arrest will be achieved with its widespread application.

Summary

1. Four patients with cardiac arrest and treatment with closed chest compression encountered in a single three month period are reported.

2. The technique of closed chest cardiac massage is simple and effective and its widespread use will almost certainly result in improvement in existing mortality rates in cardiac arrest.

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1. Porter, R. W., M.D., Ph.D, and French, J. D., M.D.: The Physiologic Basis of Cardiac Arrest During Anesthesia, Amer. Jr. Surg., Vol. 100, Pages 354-357, Aug. 1960.

2. Kouwenhoven, W. B., Dr. Ing., Jude, J. R., M.D., Knickerbocker, G. G., M.S.E. Closed-Chest Cardiac Massage, JAMA, Vol. 173, No. 10, Pages 94-97, July, 1960.

G. Rainey Williams, Jr., M.D.
800 N.E. 13th, Oklahoma City, Oklahoma

ABSTRACTS

Inhibition of Vitamin B-12 Absorption by Bile

P. C. JOHNSON,* T. B. DRISCOLL** and W. L. HONSKA***

Proc. Soc. Expt'l. Biol. & Med. 106: 181-182, January 1961

1. In the intact rat the presence of bile in the small intestine inhibits B_{12} absorption.

2. The inhibitory effect of bile is prevented by simultaneous addition of rat gastric juice.

*Present Address: Methodist Hospital, Houston, Texas, Professor of Medicine and Chief of Research.
**Present Address: Methodist Hospital, Houston, Texas, Laboratory Technician.
***Instructor in Medicine and Preventive Medicine and Public Health.

The Effect of Amphotericin on the Respiration of Cryptococcus

EVERETT R. RHODES* and HAROLD G. MUCHMORE**

Antibiotics Annual, 619-621, 1959-1960

Amphotericin B in concentrations of 1.0 to 10.0 ug./ml. will decrease the oxygen uptake of resting C. neoformans cells below endogenous levels. The increase of oxygen uptake produced by the addition of glucose to the resting cells is hindered by the presence of amphotericin B in the same concentrations.

*Resident in Medicine.
**Assistant Professor of Medicine and Preventive Medicine and Public Health, and Microbiology.

Inhibition of Gastric Secretion in the Rat by Normal Human Gastric Juice

RENE MENGUY* and WILLIAM O. SMITH**

Proc. Soc. Expt'l. Biol. & Med. 102: 665-667, 1959

Intravenous administration of dialyzed, lyophilized gastric juice from normal subjects, patients with peptic ulcer and patients with gastric carcinoma, induced pronounced depression of secretion of hydrochloric acid and water in the pylorus ligated rat. Peptic ulcer juice had the greatest inhibitory effect, whereas gastric carcinoma juice had the least.

*Assistant Professor of Surgery.
**Assistant Professor of Medicine.

Interactions of Triethylenethiophosphoramide, Estrogen and Gonadotropin on the Ovary of Hypophysectomized Immature Rat

R. W. PAYNE* and THOMAS L. WHITSETT**

Proc. Soc. Expt'l. Biol. & Med. 106: 189-191, January 1961

In the hypophysectomized weanling rat triethylenethiophosphoramide (Thio-TEPA) produced quantitative destruction of granulosa cells and ova. Stimulation of the ovary by pituitary gonadotropin was antagonized by Thio-TEPA, resulting in blocking of luteinization and formation of cystic follicles. Diethylstilbestrol partially protected against destructive effects of Thio-TEPA on the ovary allowing lutenization to proceed. Under all circumstances Thio-TEPA caused a quantitative reduction in ovarian weight over a period of five days.

*Associate Professor of Pharmacology and Instructor in Medicine.
**Third year Medical Student.

Investigation into the Development and Clinical Testing of a Poliomyelitis Vaccine Containing Standardized Amounts of Purified Poliomyelitis Virus Antigens

MAURICE R. HILLEMAN,* JESSE CHARNEY,** ALFRED A. TYTELL,*** CARL WEIHL,**** DAVID CORNFELD,***** JOSEPH T. ICHTER,****** HARRIS D. RILEY, Jr.,******* and NANCY HUANG********

Academy of Medicine of New Jersey Special Bulletin 6: 2-31, July 1960

The development of a highly purified and concentrated killed poliomyelitis virus vaccine was described. Purification was achieved by a method involving initial precipitation of the virus with nucleic acid at low pH followed by combined chemical and physical separation. The standardization of viral antigen in the vaccine was based on assays by spectrophotometry, ultracentrifugal boundary analysis and protein nitrogen determination. The relatively avirulent type I Parker strain was substituted for the highly neurovirulent Mahoney strain used in the current Salk vaccine. Vaccine preparation otherwise followed the conventional procedures used to prepare ordinary Salk vaccine.

Purified poliomyelitis vaccine "1 A" which contained initially 3.0 mcg. of type I (Parker), 0.6 mcg. type II and 1.0 mcg. of type III viral antigen per 0.5 ml. dose was tested for capacity to induce antibody in human subjects. Much of the viral antigen was removed from solution by adsorption to the glass of the final containers. It was impossible to state, therefore, how much antigen was actually given to the human subjects. In spite of such removal, however, the vaccine proved highly immunogenic effecting seroconversion in excess of 90% of initially triply sero-negative persons following only two 0.5 ml. doses of the vaccine given one month apart. The problem of adsorption was solved by suspending the viral antigen in medium 199 containing Tween 80. The vaccine was free of serologically detectable monkey kidney antigen and there were no significant untoward reactions in human subjects. The purified vaccine appears to provide an answer to the current public health need for poliomyelitis vaccine of uniform high potency.

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****Department of Pediatrics, Cincinnati General Hospital, Cincinnati, Ohio.
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******Department of Pediatrics, University of Pennsylvania School of Medicine and the Hospital of the University of Pennsylvania, Philadelphia.
*******Professor of Pediatrics, University of Oklahoma School of Medicine.
********St. Christopher's Hospital, Philadelphia, Pennsylvania.

Latex Agglutination by the Reaction of Human Growth Hormone With Its Antiserum

DOMAN K. KEELE* and JANE WEBSTER**

Proc. Soc. Expt'l. Biol. & Med. 106: 168-170, January 1961

A method has been described which demonstrated that the reaction between human growth hormone and its antiserum caused agglutination of a suspension of latex.

*Assistant Professor of Pediatrics.
**Laboratory Technician.

Mechanism of Inhibition of Gastric Secretion by Fat in the Intestine

RENE MENGUY*

Proc. Soc. Expt'l. Biol. & Med. 102: 274-276, 1959

Gastric secretion in the intact rat is hibited by fat in the small intestine. This inhibitory activity is decreased when bile has been diverted previously from the small intestine. Under these same conditions, addition of bile salts to administered fat results in the same degree of inhibition as in the intact animal.

*Assistant Professor of Surgery.



IAMPIETRO



O'BRIEN



STAVINOHA



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Four 'CARI' Members Added to Staff

Four additional members of the FAA Civil Aeromedical Research Institute staff have been given academic appointments at the School of Medicine.

P. F. Iampietro, Ph. D., chief of the Environmental Physiology Branch, and Larry J. O'Brien, Ph.D., chief of the Circulation Section, were appointed associate professors of research physiology.

Others named were William B. Stavinoha, Ph.D., Pharmacology Section head, appointed assistant professor of research pharmacology, and Wallace Friedberg, Ph.D., Radiobiology Section chief, assistant professor of research biochemistry.

Doctor Iampietro received his Ph.D. at the University of Rochester and was a physiologist at the Quartermaster Research and Development Center, Natick, Massachusetts, for six years before joining CARI staff in August.

Doctor O'Brien previously was an instructor in physiology at the University of Texas Medical Branch and at Albany Medical College. He was awarded his doctorate at University of Texas Medical Branch. Doctor Stavinoha also received his Ph.D. at the University of Texas and was an instructor in pharmacology there the past two years.

Doctor Friedberg was a research associate, research fellow and biologist at Oak Ridge National Laboratory for five years before assuming the CARI position. He completed his graduate work at Michigan State University.

OU Receives $16,000 For Student Scholarships

The Avalon Foundation, New York City, has awarded $16,000 to the University of Oklahoma School of Medicine for student scholarships, Mark R. Everett, Ph.D., director and dean, has announced.

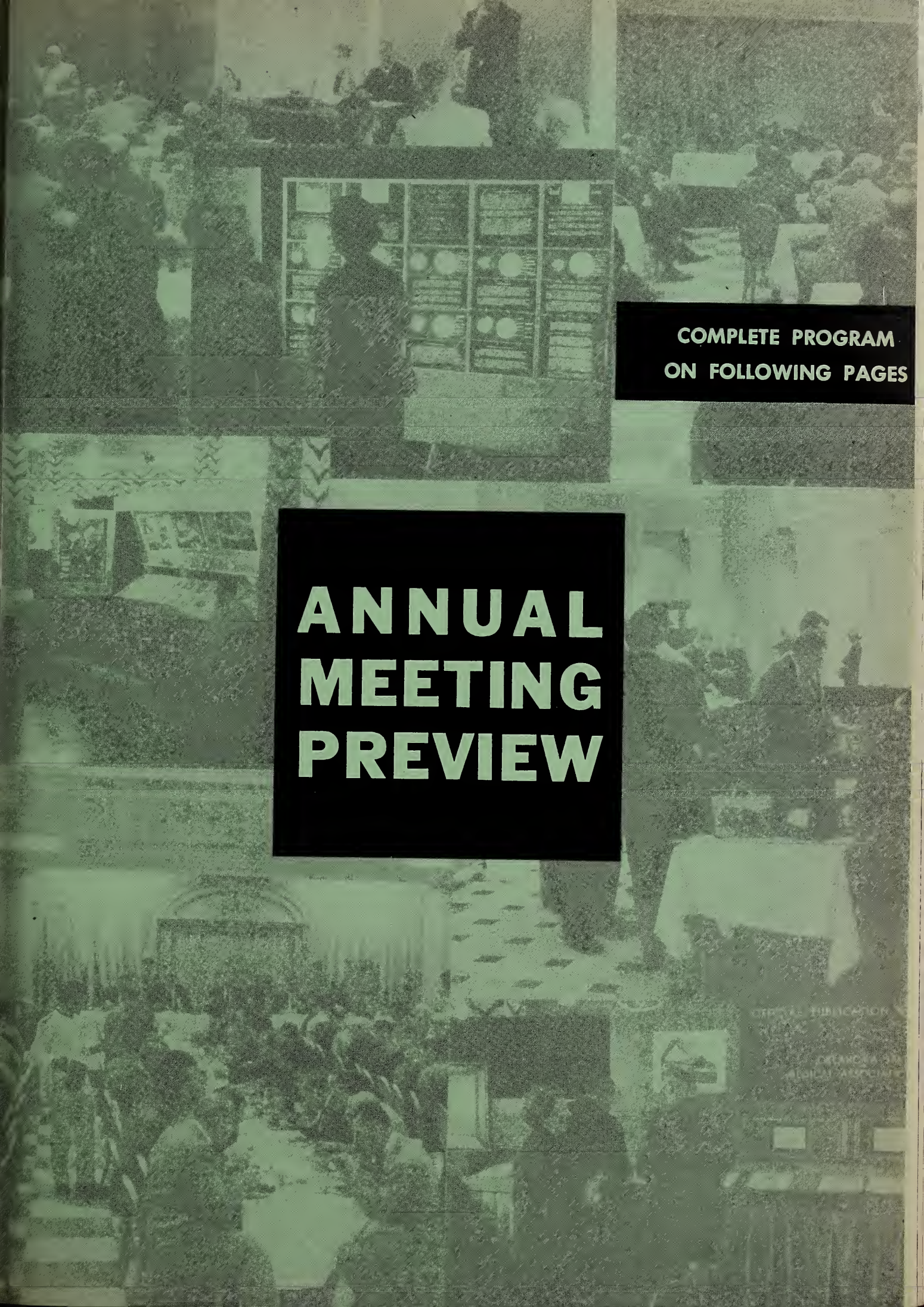
It is the first grant of this nature the school has received. Only scholarship money available to OU medical students in recent years has been $1,000 given annually by an individual donor.

The Foundation contributed approximately $1,100,000 to the 86 United States medical schools in the first across-the-board allocation by a private foundation for student assistance. Awards ranged from $10,000 to $16,000 per school.

Said Doctor Everett: "The gift is of utmost value to our school in its attempt to attract the very best students possible to become future physicians. We have medical students with no sources of scholarship aid, whereas such resources are available to graduate students in other fields."

Doctor Thomas Parran, president of Avalon Foundation, said it is the intent of the Foundation "that the scholarship aid be granted to students on a combined basis of financial need and scholarship attainment" and that the student grants be nonrefundable.

"We will very carefully follow the intent and use the funds wisely according to the financial need and scholastic achievement of the applicant," Doctor Everett said.



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TECHNICAL EXHIBITS COMMITTEE

Robert Jabour, M.D. *Chairman*

SCIENTIFIC EXHIBITS COMMITTEE

Byron L. Bailey, M.D., *Chairman*

GOLF COMMITTEE

James W. Kelley, M.D., *Chairman*
William M. Benzing, Jr., M.D.
William F. Thomas, Jr., M.D.

DIGEST OF EVENTS



The Mayo—Annual Meeting Site

Hotel Accommodations

The Mayo, Tulsa's largest and finest hotel, will be headquarters for the 55th Annual Meeting. A large block of choice suites and rooms has been reserved for members of the Oklahoma State Medical Association. Physicians are requested to make their own reservations by writing directly to: Mr. Frank R. Bentley, Manager, The Mayo, 5th and Cheyenne, Tulsa, Oklahoma. Kindly state dates and times of arrival and departure and specify type of accommodations desired. Reservations will be confirmed by mail. Early reservations are suggested.

General Registration

Registration will open Sunday, May 7, at 9:00 a.m. in the Main Lobby Exhibit Area. Delegates may register, both for the House of Delegates and the general sessions, at a special registration desk outside the Pompeian Court on the Mezzanine of The Mayo beginning at 9:00 a.m. on Sunday, May 7.

Council

The Council of the Oklahoma State Medical Association will meet on Saturday, May 6, at 1:30 p.m. in the Pompeian Court of The Mayo.

House of Delegates

The House of Delegates will meet on Sunday, May 7, at 10:00 a.m. in the Pompeian Court of The Mayo. The House will recess for reference committee hearings at the close of the first session and will reconvene at an hour to be announced by the Speaker. A special feature of the afternoon session of the House of Delegates will be an address by Doctor F. J. L. Blasingame, Executive Vice-President of the American Medical Association, Chicago, Illinois.

Scientific Sessions

The scientific program will open at 10:00 a.m. on Sunday, May 7, in the Crystal Ballroom of The Mayo and continue until 5:00 p.m. on Tuesday, May 9. On Monday and Tuesday, May 8-9, there will be two simultaneous sessions in progress, one in the Crystal Ballroom and one in the Emerald Room, offering visiting physicians a wide range of clinical presentations from which to select. A complete program for the scientific sessions appears in this issue of *The Journal.* Fifteen hours credit, Category II, will be granted to members of the American Academy of General Practice for attendance

at the Annual Meeting. A number of specialty societies will meet on Saturday and Sunday, May 6-7, and information about such meetings appears on page 181.

Medical Motion Pictures

A program of outstanding medical motion pictures will be shown each morning, Monday and Tuesday, May 8-9, from 9:00 a.m. to 12:00 noon. Of particular interest will be "On Call To A Nation," an analysis of socialized medicine in Great Britain, and "A Matter of Fact," the latest in the William S. Merrell-American Medical Association series of medico-legal films. A complete time schedule of showings will appear in the printed program.

Roundtable Luncheons

Daily roundtable luncheons will be held in the Pompeian Court on Monday and Tuesday, May 8-9, at 12:30 p.m. Visiting distinguished guest speakers will constitute a discussion panel, and physicians are invited to submit pertinent questions. Tickets for the roundtable luncheons will be on sale at the Registration Desk in the Main Lobby and should be purchased at the time of registration. Tickets are $2.50 each.

Scientific Exhibits

Informative scientific exhibits prepared by health and medical organizations and by members of the Oklahoma State Medical Association will be on display in the Ivory Room and in the 16th Floor Exhibit Area of The Mayo, Sunday through Tuesday, May 7-9, from 8:30 a.m. to 5:00 p.m. daily.

Technical Exhibits

Thirty displays by firms offering products and services of interest to Oklahoma physicians may be seen in the Main Lobby Exhibit Area and in the 16th Floor Exhibit Area of The Mayo. Technical exhibits will be open Sunday through Tuesday, May 7-9, from 9:00 a.m. to 5:00 p.m. daily. A complete list of exhibitors appears in this issue of *The Journal*. Physicians are reminded that these firms contribute much to the medical profession and make possible the Annual Meeting. Visit each exhibit.

Hobby Show

Sponsored by the Woman's Auxiliary, the Physicians Hobby Show will display the crafts and hobbies of Oklahoma doctors and their wives. This annual feature may be seen Sunday through Tuesday, May 7-9, in the Ivory Room of The Mayo.

Golf Tournament

The Annual Golf Tournament of the Oklahoma State Medical Association will be conducted informally at beautiful Oaks Country Club of Tulsa. Physicians may play at their convenience any time Monday or Tuesday, May 8-9. The greens fee is $3.00 per person. Golf scores should be turned in at the Pro Shop of Oaks Country Club. Several beautiful trophies, contributed by leading Tulsa druggists, will be presented to winners at the Association Dance on Tuesday evening, May 9, at The Mayo.

Past-Presidents' Breakfast

The Annual Past-Presidents' Breakfast of the Oklahoma State Medical Association will be held at 8:30 a.m. on Monday, May 8, in the beautiful Terrace Room of The Mayo.

Social Events

On Monday, May 8, the President's Inaugural Dinner will be held in the Crystal Ballroom. A social hour, beginning at 6:30 p.m. in the Pompeian Court, will precede the dinner. Following the inaugural ceremonies, after-dinner entertainment will feature Walter (Zaney) Blaney, the hilarious pickpocket comedian, and the jazz rhythms of the Musical Doctors of Enid.

On Tuesday, May 9, the OSMA Annual Dance will be held in the Crystal Ballroom of The Mayo. Dancing to the music of Paul Neighbors, "The Prince of Personality," and his famous orchestra will begin at 8:30 p.m. An intermission floor show will feature a return engagement of Doctor James Brown and His Greene County Medical Society Boys of Springfield, Missouri, nationally known troupe of singing physicians.

Distinguished Guest Speakers

T. DALE ALFORD, M.D.
Ophthalmology
Little Rock, Arkansas



United States Congressman from Arkansas. Clinical Assistant Professor of Surgery (Ophthalmology), University of Arkansas School of Medicine. Medical Degree, University of Arkansas School of Medicine, Class of 1939. Formerly Instructor in Ophthalmology, Emory University School of Medicine, 1946-48. Fellow, American Academy of Ophthalmology and Otolaryngology. Fellow, American College of Surgeons. Fellow, International College of Surgeons. Fellow, American Association for Research in Ophthalmology. Member, Board of Trustees, Little Rock University. Formerly Chairman of the Committee on Public Relations, Arkansas Medical Society. Past-President, Little Rock Civitan Club. Past-President, Arkansas State Opera Association. Elected to 86th Congress in 1958, re-elected to 87th Congress in 1960. *Sponsors: Duane E. Brothers, M.D., and Charles G. Stuard, M.D.*

CARL ANDERSON
Medical Administration
Portland, Oregon



Administrator, The Portland Clinic. President, Western Section of the National Association of Clinic Managers. Fellow and Member of the Board of Directors, American College of Clinic Managers. Educated Portland State College. Military Secretary to Commanding General, Pacific Ocean Areas, United States Army, 1942-46. Prominent civic leader of Portland, active in the Portland Chamber of Commerce, Portland Realty Board, Portland Association of Building Owners and Managers, and Toastmasters International. Administrator of Portland Clinic since 1946 and widely known for his progressive programs in clinic management and administrative procedures. *Sponsors: Mr. Arthur Johnson, Business Manager, Springer Clinic, and Mr. Joseph W. Rhine, Business Manager, Glass-Nelson Clinic.*

F. J. L. BLASINGAME, M.D.
Medical Administration
Chicago, Illinois



Executive Vice-President and General Manager, American Medical Association. Medical Degree, University of Texas Medical Branch, Galveston, Class of 1928. Formerly member of the faculty of the University of Texas Medical Branch. In private practice of general surgery, Wharton Clinic, Wharton, Texas, 1932-57. President, Texas State Medical Association, 1955. Elected to the Board of Trustees of the American Medical Association by the AMA House of Delegates in 1949, and subsequently held many important committee assignments. Named Executive Vice-President and General Manager, American Medical Association, in 1958, Doctor Blasingame has been responsible for widespread reforms in AMA management. Formerly President, Blue Cross-Blue Shield Plans of Texas. Chairman, Medical Advisory Board, Sears-Roebuck Foundation. *Sponsors: Wilkie D. Hoover, M.D., John E. McDonald, M.D., and Malcom E. Phelps, M.D.*

GEORGE E. BURCH, M.D.
Internal Medicine
New Orleans, Louisiana



Professor and Chairman of the Department of Medicine, Tulane University School of Medicine. Medical Degree, Tulane University School of Medicine, Class of 1933. Diplomate, American Board of Internal Medicine. Fellow, American College of Physicians. Fellow, American College of Chest Physicians. Editor, *American Heart Journal.* Editorial Board, AMA *Archives of Internal Medicine.* Associate Editor, *American Journal of Medical Sciences.* Author or co-author of 280 published scientific papers and eight textbooks. Gold Medal Award, American Medical Association, 1947. Southern Medical Association Research Award, 1947. Modern Medicine Award, 1953. Formerly member of the Board of Directors, American Heart Association, 1953-58. Formerly Chairman, Section on Experimental Medicine and Therapeutics, American Medical Association, 1957-58. Fellow, Royal Society of Medicine, England. *Sponsors: William S. Jacobs, M.D., and V. William Wood, M.D.*

L. HENRY GARLAND, M.D.
Radiology
San Francisco, California



Clinical Professor of Radiology, University of California School of Medicine. Medical Degree, Dublin University Medical School, 1924. Formerly member of the faculty of Stanford University School of Medicine, 1929-58. Radiologist-In-Chief, San Francisco General Hospital. Diplomate, American Board of Radiology. Past-President, Radiological Society of North America. Past-President, American College of Radiology. Member, American Roentgen Ray Society. Formerly Chairman, Committee on Cancer Diagnosis and Therapy, National Research Council, 1952-57. Member, Cancer Commission, California Medical Association. Chief Radiological Consultant, Letterman General Army Hospital, San Francisco. Radiologist to St. Joseph's Hospital of San Francisco. *Sponsors: Walter E. Brown, M.D., J. Murphree, M.D. and D. Reid Tickle, M.D.*

DAVID M. HUME, M.D.
Surgery
Richmond, Virginia



Professor and Chairman of the Department of Surgery, Medical College of Virginia. Medical Degree, University of Chicago School of Medicine, Class of 1943. Formerly member of the faculty of Harvard Medical School, 1946-53, 1955-56. Diplomate, American Board of Surgery. Fellow, American College of Surgeons. Fellow, American Surgical Association. Fellow, Southern Surgical Association. Member, Society of University Surgeons. Member, Halsted Surgical Society. Formerly Director of Laboratories for Research in Surgery, Harvard Medical School, 1955-56. Member, American Society for Experimental Pathology. Member, The Society for Vascular Surgery. Member, Society for Clinical Investigation. *Sponsors: Martin Leibovitz, M.D. and Clarence I. Britt, M.D.*

PATRICK H. HANLEY, M.D.
Proctology
New Orleans, Louisiana



Assistant Professor of Surgery (Proctology), Tulane University School of Medicine. Medical Degree, Tulane University School of Medicine, Class of 1933. Diplomate, American Board of Surgery. Diplomate, American Board of Proctology. Fellow, American College of Surgeons. Fellow, American Proctologic Society. Fellow, Southeastern Surgical Congress. Member, Alton Ochsner Surgical Society. Member, Mid-West Proctologic Society. Fellow, Southeastern Proctologic Society. Award, Ohio Valley Proctologic Society Placque. Award, New Jersey Proctologic Society Placque. Member, New Orleans Surgical Society. *Sponsors: Lowell L. Stokes, M.D., C. Thomas Thompson, M.D. and John G. Matt, M.D.*

WALLACE N. JENSEN, M.D.
Internal Medicine
Pittsburgh, Pennsylvania



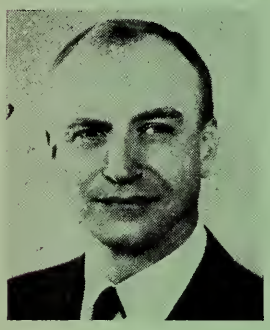
Assistant Professor of Medicine, University of Pittsburgh School of Medicine. Medical Degree, University of Utah School of Medicine, 1945. Formerly member of the faculty of the University of Utah School of Medicine, 1952-53, and Duke University School of Medicine, 1953-55. Diplomate, American Board of Internal Medicine. Author of numerous publications in the field of Hematology. *Sponsors: C. S. Lewis, Jr., M.D. and Murray M. Cash, M.D.*

CARROLL B. LARSON, M.D.
Orthopedic Surgery
Iowa City, Iowa



Professor and Chairman of the Department of Orthopedic Surgery, University of Iowa School of Medicine. Director of the Division of Rehabilitation, University of Iowa Hospitals. Medical Degree, University of Iowa School of Medicine, Class of 1933. Formerly member of the faculty of Harvard Medical School, 1940-50. Diplomate, American Board of Orthopedic Surgery. Treasurer, American Academy of Orthopedic Surgeons. Fellow, American College of Surgeons. Member, American Orthopedic Association. Member, Orthopedic Research Society. Recipient of the Commander Order of St. Olaf, Norway, 1948. Chairman of the Sub-Committee on Rehabilitation, Iowa State Medical Society. Member of the National Advisory Board of Shriner's Hospitals. *Sponsors: Robert L. Imler, Jr., M.D. and Norman L. Dunitz, M.D.*

JOHN I. NURNBERGER, M.D.
Psychiatry
Indianapolis, Indiana



Professor and Chairman of the Department of Psychiatry, Indiana University School of Medicine. Director, The Institute of Psychiatric Research, Indianapolis. Medical Degree Northwestern University School of Medicine, Class of 1943. Formerly Director of Clinical Laboratories, Institute of Living, Hartford, Connecticut, 1951-56. Formerly member of the faculty of Yale University School of Medicine, 1953-56. Diplomate, American Board of Psychiatry and Neurology. Fellow, American Psychiatric Association. Member, American Neurological Association. Fellow, American Academy of Neurology. Award, Northwestern University Medical School's Centennial Merit Award, citing cytochemical and biochemical studies in nitrogen metabolism. Consultant to the United States Public Health Service. Member, American Histochemical Society. *Sponsors: Tom R. Turner, M.D. and John F. Gray, Jr., M.D.*

ROBERT S. MYERS, M.D.
Surgery
Chicago, Illinois

Executive Assistant Director, American College of Surgeons. Medical Degree, Harvard Medical School, Class of 1937. Surgical Residency at Peter Bent Brigham Hospital and Children's Hospital of Boston, Massachusetts. Formerly member of the faculty of Harvard Medical School. In private practice of Surgery, Boston, Massachusetts, 1942-51. Joined the Staff of the American College of Surgeons in 1951. Fellow, American College of Surgeons. Member, Chicago Medical Society. *Sponsors: Hays R. Yandell, M.D., and Hugh Perry, M.D.*

JOSEPH H. PRATT, M.D.
Gynecology
Rochester, Minnesota



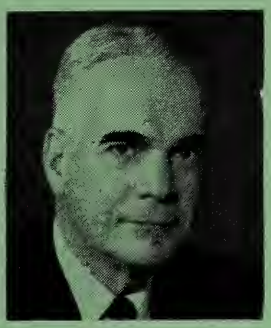
Head, Surgical Section, The Mayo Clinic. Associate Professor of Surgery (Gynecology), Graduate School of Medicine, Mayo Foundation, University of Minnesota. Medical Degree, Harvard Medical School, Class of 1937. Diplomate, American Board of Surgery. Diplomate, American Board of Obstetrics and Gynecology. Fellow, American College of Surgeons. Fellow, American College of Obstetricians and Gynecologists. Member, Society of Pelvic Surgeons. Fellow, Western Surgical Society. Member, Central Association of Obstetricians and Gynecologists. Joined the Staff of The Mayo Clinic in 1940. Widely known for his research publications in the field of Gynecological Surgery. *Sponsors: William F. Thomas, Jr., M.D. and Dixon N. Burns, M.D.*

ROBERT J. PRENTISS, M.D.
Urology
San Diego, California



Senior Urologist, San Diego County General Hospital. Medical Degree, University of Iowa School of Medicine, Class of 1934. Formerly member of the faculty of the University of Iowa School of Medicine, 1938-42. Diplomate, American Board of Urology. Fellow, American College of Surgeons. Fellow, American Urological Association. President, San Diego County Medical Society, 1958. President, San Diego Academy of Medicine, 1959. President, Western Urologic Forum, 1954. Author of over forty published papers in the field of Urology. Widely known for his scientific exhibits before the American Medical Association, American Urological Association and other organizations, many of which have been awarded medals and prizes. *Sponsors: Karl F. Swanson, M.D. and Maxwell A. Johnson, M.D.*

WILLIAM L. RIKER, M.D.
Pediatric Surgery
Chicago, Illinois



Assistant Professor of Surgery, University of Illinois School of Medicine. Medical Degree, Harvard Medical School, Class of 1939. Diplomate, American Board of Surgery. Fellow, American College of Surgeons. Fellow, American Academy of Pediatrics. Member, Society for Cardiovascular Surgery. Attending Surgeon, Children's Memorial Hospital of Chicago. Consulting Surgeon, St. Francis Hospital of Evanston. Attending Surgeon, Grant Hospital of Chicago. Member, Central Surgical Society. Widely known for his research and publications in the field of Pediatric Surgery. *Sponsors: Irvin B. Braverman, M.D. and Vance Lucas, M.D.*

DONALD W. SELDIN, M.D.
Internal Medicine
Dallas, Texas



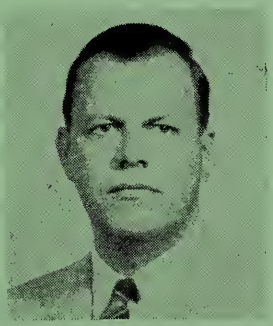
Professor and Chairman of the Department of Internal Medicine, University of Texas Southwestern Medical School. Medical Degree, Yale University School of Medicine, Class of 1943. Formerly member of the faculty of Yale University School of Medicine. Editorial Board, *The Journal of Laboratory and Clinical Medicine*. Fellow, American College of Physicians. Fellow, Royal Society of Medicine. Fellow, American Society for Clinical Investigation. Chief of Medical Service, Parkland Memorial Hospital of Dallas. Consultant to Brooke Army Hospital, Fort Sam Houston, Texas. Member, American Federation for Clinical Research. Member, Society for Experimental Biology and Medicine. Consultant to the Surgeon-General of the United States. *Sponsors: Robert A. Nelson, M.D. and John W. Ward, M.D.*

PAUL A. di SANT'AGNESE, M.D.
Pediatrics
Bethesda, Maryland



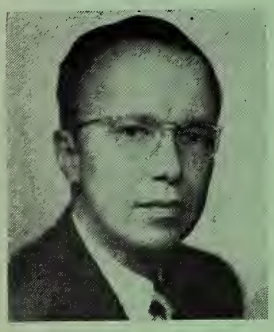
Chief, Pediatric Metabolism Branch, National Institute of Arthritis and Metabolic Diseases, United States Public Health Service. Clinical Professor of Pediatrics, Georgetown University Medical School. Lecturer in Pediatrics, Johns Hopkins University School of Medicine. Medical Degree, University of Rome School of Medicine, Class of 1938. Sc.D. (Medicine), Columbia University, 1948. Formerly member of the faculty of the Columbia University College of Physicians and Surgeons, Department of Pediatrics, 1944-59. Director, William Green Clinic for Cystic Fibrosis and Allied Disorders, Childrens Hospital of the District of Columbia. Diplomate, American Board of Pediatrics. Fellow, American Academy of Pediatrics. Fellow, American Pediatric Society. Fellow, Society for Pediatric Research. *Sponsors: John C. Kramer, M.D. and Herschel J. Rubin, M.D.*

CHARLES R. STEPHEN, M.D.
Anesthesiology
Durham, North Carolina



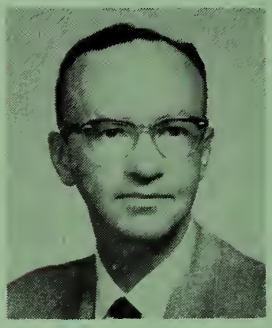
Professor of Anesthesia, Duke University School of Medicine. Chief, Division of Anesthesia, Duke Hospital, Durham, North Carolina. Medical Degree, McGill University School of Medicine, Class of 1940. Diplomate, American Board of Anesthesiology. Fellow in Anesthesia, Royal College of Physicians and Surgeons of Canada. Formerly member of the faculty of McGill University School of Medicine. Editor, *Survey of Anesthesiology*. Fellow, American Society of Anesthesiologists. Member, International Anesthesia Research Society. Member, American Academy of Anesthesiology. Consultant in Anesthesia, United States Veterans Administration Hospital of Durham, North Carolina. Member, Canadian Anesthestists Society. *Sponsors: Howard A. Bennett M.D. and H. Kenneth Ihrig, M.D.*

LEANDRO M. TOCANTINS, M.D.
Pathology
Philadelphia, Pennsylvania



Professor of Clinical and Experimental Medicine, Jefferson Medical College. Medical Degree, Jefferson Medical College, Class of 1926. Editorial Board, *The Journal of Hematology*. Editorial Board, *American Journal of Physiology*. Diplomate, American Board of Pathology. Formerly Vice-President, International Society of Hematology. Director, Charlotte Drake Cardeza Foundation for Research in Diseases of the Blood, Jefferson Medical College. Fellow, American College of Physicians. Fellow, American Society for Clinical Investigation. Fellow, American Physiological Society. Consultant in Hematology, National Clinical Center, Bethesda, Maryland. Member, Society for Experimental Biology and Medicine. *Sponsors: Emil E. Palik, M.D. and John F. Fitzgibbons, M.D.*

JOHN G. WALSH, M.D.
General Practice
Sacramento, California



President, American Academy of General Practice, 1960-61. Medical Degree, Marquette University School of Medicine, Class of 1938. Editorial Board, *California Medicine*. Founding Editor, *The California GP*. Former President, California Academy of General Practice. First President, Sacramento Academy of General Practice. Formerly Chairman, General Practice Department, Mercy Hospital of Sacramento. Treasurer, Sacramento Medical Care Foundation. Chairman, Advisory Board for Medical Specialists Liaison Committee, American Academy of General Practice. Past-President, Sacramento Catholic Physicians Guild. Vice-President, Sacramento Chapter, American Cancer Society. *Sponsors: Marshall O. Hart, M.D. and Harlan Thomas, M.D.*

Annual Meeting

TELEPHONE MESSAGE CENTER

While you are attending the Annual Meeting, your emergency calls may be referred to

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Sunday, May 7, 1961

MORNING SESSION, Crystal Ballroom, The Mayo
C. S. Lewis, Jr., M.D., Tulsa, Presiding

10:00 a.m. DIAGNOSIS AND TREATMENT OF ORGANIC BEHAVIOR DISORDERS IN CHILDREN
Paul C. Benton, M.D., *Tulsa*

10:20 a.m. BASIC RULES FOR IDENTIFICATION OF MAJOR EMOTIONAL DISORDERS
John I. Nurnberger, M.D., *Indianapolis, Indiana*

11:10 a.m. THE REGULATION OF ELECTROLYTE EXCRETION BY ADRENAL STEROIDS
Donald W. Seldin, M.D., *Dallas, Texas*

12:10 a.m. MANAGEMENT OF THE DILATED HEART
George E. Burch, M.D., *New Orleans, Louisiana*

AFTERNOON SESSION, Crystal Ballroom, The Mayo
Donald L. Brawner, M.D., Tulsa, Presiding

2:00 p.m. MEDICAL AND SURGICAL TREATMENT OF THE UNDESCENDED TESTICLE
Robert J. Prentiss, M.D., *San Diego, California*

2:30 p.m. DIFFICULTIES IN DIAGNOSIS AND TREATMENT OF ENDOMETRIOSIS
Joseph H. Pratt, M.D., *Rochester, Minnesota*

3:00 p.m. MANAGEMENT OF ANGINA PECTORIS
George E. Burch, M.D., *New Orleans, Louisiana*

3:30 p.m. TUMORS IN CHILDHOOD
William L. Riker, M.D., *Chicago, Illinois*

4:10 p.m. Adjournment to Permit Physicians to Attend Specialty Group Meetings

Monday, May 8, 1961

MORNING SESSION, Crystal Ballroom, The Mayo
Mark R. Johnson, M.D., Oklahoma City, Presiding

8:45 a.m. PITFALLS IN THE DIAGNOSIS OF PERICARDITIS IN INFANTS AND CHILDREN
Glen G. Cayler, M.D., *Oklahoma City* and M. Taybi, M.D., *Oklahoma City*

9:05 a.m. THE BIOLOGICAL AND CLINICAL SIGNIFICANCE OF THE GASTRIC JUICE
Stewart Wolf, M.D., *Oklahoma City*

9:25 a.m. TWO COMMON TREATMENT NEEDS OF ALL PATIENTS
John I. Nurnberger, M.D., *Indianapolis, Indiana*

10:35 a.m. Intermission—Visit Exhibits

10:50 a.m. AN OBJECTIVE LOOK AT AMERICAN MEDICINE
F. J. L. Blasingame, M.D., *Chicago, Illinois*

11:20 a.m. THE DIAGNOSIS AND MANAGEMENT OF THE UROLOGIC PATIENT IN GENERAL PRACTICE
Robert J. Prentiss, M.D., *San Diego, California*

11:50 a.m. THE TREATMENT OF RECURRENT AND CHRONIC PANCREATITIS
David M. Hume, M.D., *Richmond, Virginia*

MONDAY, MAY 8 (Continued)

12:30 P.M. ROUNDTABLE LUNCHEON—Pompeian Court, The Mayo
Kelly M. West, M.D., Oklahoma City, Presiding

Guest Participants: Robert J. Prentiss, M.D., David M. Hume, M.D., John I. Nurnberger, M.D., Wallace N. Jensen, M.D., F. J. L. Blasingame, M.D., Joseph H. Pratt, M.D., William L. Riker, M.D.

AFTERNOON SESSION I, Crystal Ballroom, The Mayo
Walter E. Brown, M.D., Tulsa, Presiding

2:00 p.m. SYMPOSIUM: SOCIO-ECONOMIC PROBLEMS OF AMERICAN MEDICINE
T. Dale Alford, M.D., *Little Rock, Arkansas*
Mr. Carl Anderson, *Portland, Oregon*
F. J. L. Blasingame, M.D., *Chicago, Illinois*
Walter E. Brown, M.D., *Tulsa*
Robert S. Myers, M.D., *Chicago, Illinois*
John G. Walsh, M.D., *Sacramento, California*

3:30 p.m. Intermission—Visit Exhibits

3:45 p.m. EVALUATION OF COBALT THERAPY
L. Henry Garland, M.D., *San Francisco, California*

4:30 p.m. PHYSIOLOGY OF FAT-ANTI-ACID THERAPY FOR PEPTIC ULCER
Virgil Ray Forester, M.D., *Oklahoma City*

AFTERNOON SESSION II, Emerald Room, The Mayo
J. Hoyle Carlock, M.D., Ardmore, Presiding

2:00 p.m. GYNECOLOGICAL LESIONS REQUIRING EMERGENCY TREATMENT
Joseph H. Fratt, M.D., *Rochester, Minnesota*

2:30 p.m. SURGICAL EMERGENCIES IN THE NEWBORN
William L. Riker, M.D., *Chicago, Illinois*

3:05 p.m. CYSTIC FIBROSIS OF THE PANCREAS
Paul A. di Sant'Agnese, M.D., *Bethesda, Maryland*

3:35 p.m. Intermission—Visit Exhibits

3:45 p.m. ARTHROPLASTY OF THE HIP IN OSTEOARTHRITIS
Carroll B. Larson, M.D., *Iowa City, Iowa*

4:15 p.m. CONGENITAL ANOMALIES OF THE ANUS AND RECTUM
Patrick H. Hanley, M.D., *New Orleans, Louisiana*

4:40 p.m. PETROLEUM'S HEARTACHE—THE CARDIAC: 500 FIVE-YEAR FATES
C. Stanley Huntington, M.D., *Bartlesville,* and William Best Thompson, M.D., *Oklahoma City*

Tuesday, May 9, 1961

MORNING SESSION, Crystal Ballroom, The Mayo
Clinton Gallaher, M.D., Shawnee, Presiding

8:45 a.m. PHYSICAL MEDICINE AND REHABILITATION OF THE PAINFUL SHOULDER
Herbert Kent, M.D., *Oklahoma City*

9:05 a.m. MAMMOPLASTY—REDUCTION AND AUGMENTATION
James W. Kelley, M.D., *Tulsa*

9:25 a.m. MALABSORPTION SYNDROME IN PEDIATRICS
Paul A. di Sant'Agnese, M.D., *Bethesda, Maryland*

9:55 a.m. Intermission—Visit Exhibits

10:10 a.m. PLEASE DON'T GIVE ME ETHER
Charles R. Stephen, M.D., *Durham, North Carolina*

10:40 a.m. THE CLINICAL APPLICATIONS OF HAPTOGLOBIN DETERMINATIONS
Wallace N. Jensen, M.D., *Pittsburgh, Pennsylvania*

11:10 a.m. MANAGEMENT OF BLEEDING ESOPHAGEAL VARICES
David M. Hume, M.D., *Richmond, Virginia*

11:50 a.m. PATHOGENESIS OF BACKACHE
Carroll B. Larson, M.D., *Iowa City, Iowa*

12:30 P.M. ROUNDTABLE LUNCHEON, Pompeian Court, The Mayo
Tom S. Gafford, M.D., Muskogee, Presiding

Guest Participants: L. Henry Garland, M.D., Paul A. di Sant'Agnese, M.D., Carroll B. Larson, M.D., Patrick H. Hanley, M.D., Charles R. Stephen, M.D.

AFTERNOON SESSION I, Crystal Ballroom, The Mayo
George H. Brown, M.D., McAlester, Presiding

2:00 p.m. SYMPOSIUM: BLOOD FRACTIONS IN CLINICAL MEDICINE
Leandro M. Tocantins, M.D., *Philadelphia, Pennsylvania*
Wallace N. Jensen, M.D., *Pittsburgh, Pennsylvania*
Charles R. Stephen, M.D., *Durham, North Carolina*
George H. Brown, M.D., *McAlester*

4:00 p.m. REVIEW OF BLOOD URIC ACID VALUES RELATED TO AGE, SEX, AND PRE-EXISTING DISEASE
Maurice C. Gephardt, M.D., *Muskogee*

AFTERNOON SESSION II, Emerald Room, The Mayo
Wendell L. Smith, M.D., Tulsa, Presiding

2:00 p.m. TREATMENT OF MALIGNANT LYMPHOMAS
L. Henry Garland, M.D., *San Francisco, California*

2:45 p.m. OPEN HEART SURGERY IN A PRIVATE HOSPITAL: CLINICAL EXPERIENCE WITH 150 CASES
John M. Carey, M.D., *Oklahoma City;* Nazih Zudhi, M.D., *Oklahoma City;* and Allen E. Greer, M.D., *Oklahoma City*

3:15 p.m. Intermission—Visit Exhibits

3:30 p.m. MANAGEMENT OF VILLOUS TUMORS OF THE COLON AND RECTUM
Patrick H. Hanley, M. D., *New Orleans, Louisiana*

4:00 p.m. CONSERVATIVE MANAGEMENT OF INTERVERTEBRAL DISK INJURIES
John A. Blaschke, M.D., *Oklahoma City*

Medical Motion Pictures

A program of outstanding medical motion pictures will be shown on Monday and Tuesday mornings, May 8-9, at the 55th Annual Meeting. These films have been selected for their practical application in private practice and for general interest to medical progress.

Physicians are particularly urged to see "On Call To A Nation," an 80-minute documentary reviewing the first ten years of socialized medicine in Great Britain. The problems encountered by doctors under such a system are graphically described. "On Call To A Nation" will be shown at 10:15 a.m. on Monday, May 8, in the Metropolitan Room of The Mayo.

SCHEDULE OF SHOWINGS

MONDAY, MAY 8, 1961
Metropolitan Room—The Mayo

9:00 a.m. DERMATOLOGIC OFFICE PROCEDURES FOR THE GENERAL PRACTITIONER
Gerald M. Frumess, M.D.

9:30 a.m. THE SURGICAL ANATOMY AND TECHNIQUE OF ORCHIOPEXY
Robert J. Prentiss, M.D.

9:50 a.m. CAUDAL PANCREATICOJEJUNOSTOMY FOR CHRONIC (RELAPSING) PANCREATITIS
John A. Schilling, M.D.

10:15 a.m. ON CALL TO A NATION
The first ten years of socialized medicine in Great Britain

11:35 a.m. INGUINAL HERNIA AND HYDROCELE IN CHILDREN
William L. Riker, M.D., Willis J. Potts, M.D. and Arthur DeBoer, M.D.

TUESDAY, MAY 9, 1961
English Room—The Mayo

9:00 a.m. A MATTER OF FACT
The latest in the William S. Merrell Company-American Medical Association fine series of films on malpractice

9:30 a.m. ACUTE GALLBLADDER DISEASE
Allen M. Boyden, M.D.

10:00 a.m. STRESS AND THE ADAPTATION SYNDROME
Hans Selye, M.D.

10:35 a.m. A SYMPOSIUM ON THE PRACTICAL USE OF ENOVID IN OVALUATION CONTROL
G. D. Searle & Company

11:35 a.m. OPEN METHOD OF BURN THERAPY
John C. Weeter, M.D.

The Scientific and Educational Exhibits

ROBERT J. PRENTISS, M.D.
San Diego, California

"Surgical Anatomy and Technique of Proper Orchiopexy"

This prize-winning exhibit illustrates an important surgical problem of interest to both specialists and general practitioners. A graphic demonstration of the techniques of proper orchiopexy.

ASSOCIATION OF AMERICAN PHYSICIANS and SURGEONS, OKLAHOMA CHAPTER
Oklahoma City

"The A.A.P.S.—A Program Of Legislative Action"

The functions of this national organization in the field of political activity, economic development of medicine, and general interest in limiting the growth of socialism in government are described in this interesting exhibit.

W. TURNER BYNUM, M.D., and D. NELLO BROWN, M.D.
MERCY HEART and RESEARCH INSTITUTE
Oklahoma City

"Early Detection of Gastric Carcinoma by Radioautography and Fluorescent Cytology"

In vivo Radioautographic studies of gastric lesions using photosensitized balloons following a tracer dose of P-32 combined with cytologic studies of gastric washings using fluorescent staining technics are seen in this exhibit. Actual balloons and color slides will be presented.

OKLAHOMA STATE DEPARTMENT OF HEALTH
Oklahoma City

"Rheumatic Fever"

Professional information on this major medical problem is provided through a series of questions and answers. Physicians may secure answers to questions by operating a panel of push-buttons.

OKLAHOMA STATE DEPARTMENT OF HEALTH
Oklahoma City

"General Services of State and Local Health Departments"

This informative display is designed to acquaint Oklahoma physicians with the wide variety of services offered to them and to the general public by the Oklahoma State Health Department through component local public health departments.

OKLAHOMA SAFETY COUNCIL
Oklahoma City

"Automobile Seat Belt Demonstration"

This exhibit illustrates the value of automotive seat belts through the use of model cars and simulated crashes. It demonstrates injury potential with and without seat belt.

SOUTHERN MEDICAL ASSOCIATION
Birmingham, Alabama

"Services of the Southern Medical Association"

America's best known regional medical organization, the Southern Medical Association, offers information about its many services to the individual physician in this attractive exhibit.

TULSA COUNTY RED CROSS REGIONAL BLOOD CENTER
Tulsa, Oklahoma

"Blood Services In Northeastern Oklahoma"

Information concerning the recent expansion of the Tulsa County Red Cross Regional Blood Center into a sixteen-county area will be distributed, along with literature reflecting the services of this important adjunct to Oklahoma Medicine.

Scientific and Educational Exhibits (Continued)

LEON HOROWITZ, M.D.
Tulsa

"Eosinophilia In Allergy—A Comparative Study"

This exhibit correlates, in a large number of patients, nasal and blood (and in some cases stool) eosinophilia with severity of symptoms, physical findings and results of allergy skin testing.

ALLEN E. GREER, M.D., JOHN M. CAREY, M.D., and NAZIH ZUHDI, M.D.
Oklahoma City

"Open Heart Surgery—A Simplified Method Using Low Flow Rate, Hemodilution and Hypothermia, With Clinical Results"

A definition of the method used, including hypothermia, hemodilution and low flow rate, both as to advisability and safety, with a brief addition of clinical experience employing this method.

JOHN R. BETSON, M.D.
Albuquerque, New Mexico

"Diagnostic Problems Concerning Ovarian Tumors"

Six case presentations featuring a short resume of pertinent facts, laboratory data, photomicrographic pictures, and with the diagnosis hidden.

ARTHRITIS and RHEUMATISM FOUNDATION
Oklahoma City and Tulsa

"Attack Arthritis"

A display of rehabilitation equipment, professional literature and pamphlets for the laity, illustrating the problems in diagnosis and treatment of arthritis and rheumatic diseases by the practicing physician, will be featured in this exhibit. Comparative case studies, illustrated with before-and-after photographs, will also be of interest to doctors.

OKLAHOMA MENTAL RETARDATION CENTER
Tulsa

"Postgraduate Training Program of the Oklahoma Mental Retardation Center, With Emphasis Upon Training of Professional Personnel"

Photographs and descriptions of the various disciplines—physicians, nurses, social workers, psychologists, etc.—as they work in the field of mental retardation. Useful literature will describe opportunities in this field and outline training programs offered by the Oklahoma Mental Retardation Center.

CIVIL DEFENSE COMMITTEE, OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City

"A 200-Bed Emergency Hospital"

A table-top model of a Civil Defense Emergency Hospital is shown as it would be seen in storage. There are presently twelve of these hospitals for disaster medical care stockpiled in Oklahoma.

JOE BURGE, M.D., EDWARD W. JENKINS, M.D. and H. F. FLANIGIN, JR., M.D.
Tulsa

"Cerebral Vascular Accidents"

Case studies, illustrated with photographs, charts and descriptions of clinical progress, define effective measures of therapy and post-operative treatment.

AVERILL STOWELL, M.D.
Tulsa

"Treatment of Unilateral Headache"

A discussion of clinical methods of treatment of unilateral headache with case presentations, charts, graphs and comparative photographs.

Thirty-one Technical Exhibitors Scheduled

The Technical Exhibits at the 55th Annual Meeting of the Oklahoma State Medical Association will be located in the Main Lobby and on the 16th Floor immediately adjacent to the Crystal Ballroom. Displays will be featured by the following firms:

Abbott Laboratories
Blue Cross-Blue Shield Plans of Oklahoma
Ciba Pharmaceutical Products
Coca-Cola Company
Doho Chemical Corporation
Geigy Pharmaceuticals
Kay Pharmacal Company
Eli Lilly and Company
J. A. Majors Company
Mead Johnson and Company
Medco Products Company
Melton-Myers, Inc.
Merck Sharp & Dohme
William S. Merrell Company
Merkel X-Ray Company
Mid-Continent Surgical Supply Company
Mid-West Surgical Supply Company
Mutual Benefit Life Insurance Company
North American Accident Insurance Company
Oklahoma Physicians Supply
Parke, Davis & Company
R. J. Reynolds Tobacco Company
St. Paul Mercury Insurance Company
Sandoz Pharmaceuticals
Sealy Southwest
G. D. Searle & Company
E. R. Squibb & Sons
S. J. Tutag and Company
Warren-Teed Products Company
Winthrop Laboratories
Insurance Company of North America—C. L. Frates

RELATED MEETINGS

American College of Surgeons

Fellows and candidates will enjoy a dinner meeting Sunday, May 7, 1961, at 6:30 p.m., Topaz Room of Hotel Tulsa. Robert S. Myers, M.D., Executive Associate Director, American College of Surgeons, will speak. Reservations are requested and should be made by writing: Hays R. Yandell, M.D., Glass-Nelson Clinic, 2020 South Xanthus, Tulsa, Oklahoma. Wives are invited and urged to attend.

American Academy of Pediatrics

The Oklahoma Chapter of the American Academy of Pediatrics will meet on Sunday, May 7, 1961, 6:30 p.m., Emerald Room, Mayo. Social hour, dinner, program.

Oklahoma State Radiological Society

This group will meet at 2:00 p.m., Terrace Room, Mayo, May 7, 1961. Following a short business meeting, a scientific program featuring film analyses and discussions of current radiological topics will be conducted. Doctor L. Henry Garland, will be guest speaker. Following a short intermission, the Society will reconvene in the Terrace Room at 6:00 p.m. for its Annual Social Hour and Banquet, to which wives are invited. All members of the OSMA are welcome.

Oklahoma State Urological Society

Oklahoma urologists will meet on Saturday, May 6, 1961, at 9:30 a.m. at Western Hills Lodge, Tahlequah, Oklahoma. Doctor Robert J. Prentiss of San Diego, California, will be the principal speaker.

Oklahoma State Internist Association

The Oklahoma State Internist Association will meet on Sunday, May 7, 1961, in the Founders Room of The Mayo. A social hour and dinner has been scheduled for 6:30 p.m. The program will feature a business session and scientific presentations.

ENTERTAINMENT . . . .



THE MUSICAL DOCTORS OF ENID. Directed by Evans E. Talley, M.D. This group of practicing physicians and dentists of Enid began playing for fun several years ago. So delightful have their jazz and modern rhythms become that they are in demand everywhere. The Musical Doctors make their first appearance before the Oklahoma State Medical Association at the President's Inaugural Dinner on Monday, May 8, 1961. You'll be in for a surprise at the expert musicianship of this group.

WALTER (ZANEY) BLANEY, "The Ambassador of Texas," has soared to nationwide success as a top comedian, master magician, and pickpocket extraordinary. His fast-paced act leaves audiences breathless as he gags his way through a hilarious audience participation show. And, you are warned, YOU may lose your shirt to Zaney Blaney. Zaney Blaney won two awards as the best all-around act at the 1960-61 Musicians and Variety Artists Convention. Based in Houston, Blaney has intrigued such celebrities as John Wayne and George Gobel with his sleight-of-hand. You can be assured of 45 minutes of riotous fun!

President's Inaugural Dinner

MONDAY, MAY 8, 1961

6:30 p.m. SOCIAL HOUR AND RECEPTION. Pompeian Court, Founders Room, Studio Room and French Room, Mezzanine, The Mayo.

7:30 p.m. DINNER AND INAUGURAL CEREMONIES. Crystal Ballroom, The Mayo. C. S. Lewis, Jr., M.D., Tulsa, General Chairman, Presiding.

8:30 p.m. ENTERTAINMENT.
The Jazz Rhythms of THE MUSICAL DOCTORS OF ENID.
WALTER (ZANEY) BLANEY, Texas' Ambassador of Fun and Frolic—Watch or he'll pick your pocket!

Ticket Information

Two for the price of one: your ticket will admit you to BOTH the President's Inaugural Dinner on Monday, May 8, and the Annual Dance and Greene County Medical Society Boys Entertainment on Tuesday, May 9. And the cost is only $7.50 per person. Two big evenings of fun and entertainment for the single price.

Attendance is limited to the capacity of the Crystal Ballroom—so act now! Tickets may be ordered in advance by writing: Convention Headquarters, Oklahoma State Medical Association, B9 Medical Arts Building, Tulsa 19, Oklahoma. Your check, made payable to "Oklahoma State Medical Association," must accompany the order. (Price, $7.50 per person.) Your tickets will come back by return mail. If any tickets remain after mail orders have been filled, they will be sold at the Registration Desk in the Main Lobby Exhibit Area of The Mayo. Don't be disappointed! Send your order now.

. . . . TWO BIG NIGHTS

Annual Dance

TUESDAY, MAY 9, 1961

Crystal Ballroom—The Mayo

8:30 p.m.—12:30 p.m.

FEATURING THE PROGRAM YOU REQUESTED BY POPULAR DEMAND

The Return Engagements Of

DOCTOR JAMES BROWN AND HIS GREENE COUNTY MEDICAL SOCIETY BOYS, SPRINGFIELD, MISSOURI, IN A NEW EDITION OF "YOUR MEDICAL HIT PARADE"

DANCING TO THE FAMOUS MUSIC OF PAUL NEIGHBORS AND HIS ORCHESTRA



THE GREENE COUNTY MEDICAL SOCIETY BOYS

Here's the entertainment program you asked for . . . a delightfully harmonious package of the Paul Neighbors Orchestra and the Greene County Medical Society Boys . . . both brought back for repeat engagements by popular demand!

Paul Neighbors and his gifted music men made a solid hit at the 1960 Annual Meeting. Known as the "Prince of Personality,"



PAUL NEIGHBORS

Paul offers a well-blended program of the old and new, sweet and bouncy, hot Latin rhythms and restful waltzes. This fast-rising orchestra has appeared on network radio and television shows, and is one of the nation's most popular hotel and night-club bands. You'll enjoy every minute of the four hour engagement.

Doctor Jim Brown and his Greene County Medical Society Boys had the doctors and their wives in stitches at the 1959 Annual Meeting. The Springfield, Missouri troupe of singing physicians are now back with a brand new edition of "Your Medical Hit Parade," packed full of medical parodies, production numbers, clowning, singing and dancing. Proceeds from their record sales and performances go to a medical student loan program.

Your ticket stubs from the Monday night Inaugural dinner are all you need to enjoy this special entertainment bonus . . . Two Big Nights in Tulsa!



CLUBHOUSE OF TULSA'S BEAUTIFUL OAKS COUNTRY CLUB

Annual Golf Tournament

More than one hundred followers of the small white sphere are expected to turn out for the Annual Golf Tournament of the Oklahoma State Medical Association.

The 1961 event will be held at Tulsa's beautiful Oaks Country Club, located Southwest of the city.

Departing from the usual procedure of designating a specific afternoon for the tournament, this year's tournament committee has announced that physician-golfers may play at their own convenience, anytime Monday or Tuesday, May 8-9. Scores should be turned in to Mr. Marion Askew at the Oaks' Pro Shop immediately after completing the 18-hole round.

The greens fee will be $3.00 per person. Golf carts and caddies will be available at the regular rates. Also, the tournament committee has arranged for locker facilities for OSMA members.

Beautiful trophies will be awarded for permanent possession to golfers with the best Low Gross score and the best Low Net score. The trophies have been purchased through contributions from thirteen Tulsa druggists.

Presentation of the awards will take place at intermisson time at Tuesday night's dance, scheduled for the Crystal Ballroom of the Mayo Hotel.

Oklahoma State Medical Association

1961 DELEGATES AND ALTERNATES

SOCIETY	DELEGATE	ALTERNATE
ATOKA	J. T. Colwick, Jr., M.D., Durant	James W. Wilson, M.D., Atoka
BRYAN		
COAL		
BECKHAM	James Bayless, M.D., Elk City	NOT REPORTED
BLAINE	NOT REPORTED (entitled to one)	
CADDO	Robert Sullivan, M.D., Carnegie	C. B. Sullivan, M.D., Carnegie
CANADIAN	Alpha Johnson, M.D., El Reno	Jack Enos, M.D., Yukon
CARTER	Clifford Lorentzen, M.D., Ardmore	Ralph Murphy, M.D., Ardmore
LOVE	Roger Reid, M.D., Ardmore	Tom Sparks, M.D., Ardmore
MARSHALL		
COOKSON HILLS (Cherokee, Adair, Sequoyah)	Bill Cook, M.D., Stilwell	C. T. Morgan, M.D., Tahlequah
CHOCTAW	Henry D. Wolfe, M.D., Hugo	Bill E. Woodruff, M.D., Hugo
PUSHMATAHA		
CLEVELAND	James L. Haddock, M.D., Norman	NOT REPORTED
McCLAIN	Robert A. Mayfield, M.D., Norman	
	T. A. Ragan, M.D., Norman	
COMANCHE	William A. Matthey, M.D., Lawton	French L. Worthen, M.D., Lawton
COTTON	Donald A. Angus, M.D., Lawton	F. D. Kalbfleisch, M.D., Lawton
CRAIG	D. H. Olson, M.D., Vinita	J. M. McMillan, M.D., Vinita
OTTAWA	W. G. Chesnut, M.D., Miami	David Carson, M.D., Fairland
CREEK	NOT REPORTED (entitled to one)	
CUSTER	Curtis B. Cunningham, M.D., Clinton	James H. Tisdal, M.D., Clinton
EAST CENTRAL (Muskogee, Wagoner and McIntosh)	NOT REPORTED (entitled to three)	
GARFIELD	Paul H. Rempel, M.D., Enid	NOT REPORTED
KINGFISHER	Avery B. Wight, M.D., Enid	
	Arthur W. Buswell, M.D., Hennessey	
	Mark D. Holcomb, M.D., Enid	
GARVIN	John M. Moore, M.D., Pauls Valley	J. A. Graham, M.D., Pauls Valley
GRADY	B. C. Chatham, M.D., Chickasha	B. B. McDougal, M.D., Chickasha
GREER	Tom L. Wainwright, M.D., Mangum	R. H. Lynch, M.D., Hollis
HUGHES	NOT REPORTED (entitled to two)	
SEMINOLE		
JACKSON	Charles L. Tefertiller, M.D., Altus	Robert S. Srigley, M.D., Altus
JEFFERSON	O. J. Hagg, M.D., Waurika	J. F. Abelarde, M.D., Waurika
KAY	Robert F. Morgan, M.D., Blackwell	L. W. Ghormely, M.D., Blackwell
NOBLE	Art Brown, Jr., M.D., Perry	Charles Martin, M.D., Perry
	J. M. Bush, M.D., Ponca City	Harold Jones, M.D., Ponca City
KIOWA	L. G. Livingston, M.D., Cordell	Roy W. Anderson, M.D., Cordell
WASHITA	Van Howard, M.D., Hobart	J. William Finch, M.D., Hobart
LeFLORE	R. W. Lowrey, M.D., Poteau	C. S. Cunningham, M.D., Poteau
HASKELL		
LINCOLN	Ned Burleson, M.D., Prague	C. W. Robertson, M.D., Chandler
LOGAN	L. H. Ritzhaupt, M.D., Guthrie	J. R. Henke, M.D., Guthrie
McCURTAIN	NOT REPORTED (entitled to one)	
MURRAY	NOT REPORTED (entitled to one)	
NORTHWESTERN (Beaver, Dewey, Ellis, Harper and Woodward)	Ralph G. Obermiller, M.D., Woodward	William F. Hudson, M.D., Buffalo
	M. H. Newman, M.D., Shattuck	Richard Burgtorf, M.D., Shattuck

OKFUSKEE	NOT REPORTED (entitled to one)	
OKLAHOMA*	Rex Kenyon, M.D.	Charles W. Cathey, M.D.
	Carl G. Coin, M.D.	M. T. Buxton, M.D.
	R. Gibson Parrish, M.D.	H. C. Moody, M.D.
	Earl M. Bricker, M.D.	C. R. Stansberry, M.D.
	F. H. McGregor, M.D.	Charles N. Atkins, M.D.
	Ralph C. Denny, M.D.	Robert E. Campbell, M.D.
	H. T. Avey, M.D.	Robert M. Bird, M.D.
	Irwin H. Brown, M.D.	J. N. Lysaught, M.D.
	C. Alton Brown, M.D.	Charles M. Harvey, M.D.
	Thomas C. Points, M.D.	Kenneth G. Ogg, M.D.
	Jim M. Taylor, M.D.	John A. Cunningham, M.D.
	Ira O. Pollock, M.D.	J. M. White, Jr., M.D.
	Mark R. Johnson, M.D.	Arthur E. Schmidt, M.D.
	Robert C. Lawson, M.D.	Elmer R. Musick, M.D.
	Lynn H. Harrison, M.D.	Alvin R. Jackson, M.D.
	Ella H. Murray, M.D.	James S. Boyle, M.D.
	Vernon D. Cushing, M.D.	John W. DeVore, M.D.
	Virgil Ray Forester, M.D.	J. J. Gable, M.D.
	Richard E. Carpenter, M.D.	Martin Andrews, M.D.
	J. Raymond Stacy, M.D.	Elwood Herndon, M.D.
	E. Neal Holden, M.D.	James R. Colvert, M.D.
	H. C. Dodson, Jr., M.D.	Karl K. Boatman, M.D.
OKMULGEE	C. E. Smith, M.D., Henryetta	Cleve Beller, M.D., Okmulgee
OSAGE	William A. Geiger, M.D., Fairfax	Vincent Mazarella, M.D., Hominy
PAYNE	M. L. Saddoris, M.D., Cleveland	R. D. Hargrove, M.D., Pawnee
PAWNEE	Haskell Smith, M.D., Stillwater	O. M. Rippy, M.D., Stillwater
	E. M. Thorp, M.D., Cushing	G. R. Smith, M.D., Cushing
PITTSBURG	Floyd T. Bartheld, M.D., McAlester	Thurman Shuller, M.D., McAlester
PONTOTOC	Ollie McBride, M.D., Ada	E. D. Padberg, M.D., Ada
	David C. Ramsay, M.D., Ada	Clarence P. Taylor, M.D., Ada
POTTAWATOMIE	Francis Davis, M.D., Shawnee	Frances P. Newlin, M.D., Shawnee
ROGERS	W. A. Howard, M.D., Chelsea	W. D. Anderson, M.D., Claremore
MAYES	A. P. Compton, M.D., Pryor	S. A. Hope, M.D., Pryor
STEPHENS	C. N. Talley, M.D., Marlow	J. P. Keller, M.D., Duncan
TEXAS	NOT REPORTED (entitled to one)	
CIMARRON		
TILLMAN	Roger G. Johnson, M.D., Frederick	William G. Harvey, M.D., Frederick
TULSA**	John E. McDonald, M.D.	James W. Kelley, M.D.
	Walter S. Larrabee, M.D.	Howard A .Bennett, M.D.
	Simon Pollack, M.D.	Richard E. McDowell, M.D.
	Harold J. Black, M.D.	Joe L. Spann, M.D.
	James C. Peters, M.D.	Homer D. Hardy, Jr., M.D.
	Charles E. Wilbanks, M.D.	Donald L. Brawner, M.D.
	Paul O. Shackelford, M.D.	Hugh Perry, M.D.
	N. C. Gaddis, M.D.	Paul A. Bischoff, M.D.
	Ben F. Gorrell, M.D.	Byron L. Bailey, M.D.
	F. L. Flack, M.D.	Sol Wilner, M.D.
	Vincel Sundgren, M.D.	Robt. M. Shepard, M.D.
	Rayburne W. Goen, M.D.	Walter F. Sethney, M.D.
	Worth M. Gross, M.D.	R. M. Wadsworth, M.D.
	C. S. Lewis, Jr., M.D.	William C. Alston, M.D.
	Harlan Thomas, M.D.	Adolph N. Vammen, M.D.
WASHINGTON	NOT REPORTED (entitled to three)	
NOWATA		
WOODS	John X. Blender, M.D., Cherokee	Forrest Hale, M.D., Cherokee
ALFALFA	E. L. Calhoon, M.D., Beaver	J. F. Simon, M.D., Alva

*All Oklahoma City
**All Tulsa



MRS. VIRGIL RAY FORESTER
Oklahoma City
President
Woman's Auxiliary
Oklahoma State
Medical Association



MRS. PAT FITE, SR.
Muskogee
President-Elect
Woman's Auxiliary
Oklahoma State
Medical Association



MRS. HARLAN ENGLISH
Danville, Illinois
President-Elect
Woman's Auxiliary
American
Medical Association



MRS. ELIAS MARGO
Oklahoma City
1st Vice-President
Woman's Auxiliary
Southern Medical
Association



MRS. MILTON L. BERG
Tulsa
1st Vice-President
Woman's Auxiliary
Oklahoma State
Medical Association



MRS. W. A. HYDE
Durant
2nd Vice-President



MRS. CHARLES W. FREEMAN
Oklahoma City
Secretary



MRS. JOHN W. RECORDS
Oklahoma City
Treasurer



MRS. LOUIS S. FRANK
Oklahoma City
Treasurer-Elect



MRS. ERIC M. WHITE
Tulsa
General Chairman

WOMAN'S AUXILIARY

to the

OKLAHOMA STATE MEDICAL ASSOCIATION

ANNUAL MEETING

May 7, 8, 9, 1961

MAYO HOTEL, TULSA, OKLAHOMA

MRS. ERIC M. WHITE
Convention Chairman

MRS. DICK HUFF
Co-Chairman

REGISTRATION AND INFORMATION

SUNDAY, MAY 7, 1961

Mezzanine, Mayo Hotel—3:00 p.m.-5:00 p.m.

Hospitality Room

The Hospitality Room will be open during registration hours Sunday, Monday and Tuesday for the convenience of members and guests. Refreshments will be served.

OKLAHOMA DOCTORS' AND AUXILIARY MEMBERS' HOBBY SHOW

MRS. WM. R. R. LONEY
Chairman

MRS. HERBERT J. FORREST
MRS. WILLIAM B. RENFROW
Co-Chairmen

Hobbies of Oklahoma Physicians and Auxiliary members are presented in this interesting exhibit and will be on display on the Mezzanine, Mayo Hotel.

TICKETS

Tickets for the various luncheons will be sold at the Registration desks.

WOMAN'S AUXILIARY

to the

OKLAHOMA STATE MEDICAL ASSOCIATION ANNUAL MEETING

May 7, 8, 9, 1961

Mayo Hotel — Tulsa, Oklahoma

PROGRAM

SUNDAY, MAY 7, 1961

3:00 p.m.-5:00 p.m.—REGISTRATION AND INFORMATION, Mezannine, Studio Room, Mayo Hotel.

4:00 p.m.—EXECUTIVE BOARD MEETING, President's Suite, Mayo Hotel.

5:30 p.m.—SOCIAL HOUR FOR BOARD MEMBERS AND HUSBANDS, President's Suite, Mayo Hotel.

MONDAY, MAY 8, 1961

8:30 a.m.—PAST PRESIDENTS' BREAKFAST, English Room, Mayo Hotel. Hostess: Mrs. Ollie McBride.

9:00 a.m.—REGISTRATION AND INFORMATION, Mezannine, Studio Room, Mayo Hotel. Coffee and Rolls will be served.

10:00 a.m.—GENERAL MEETING, Emerald Room, Mezzanine, Mayo Hotel. Mrs. Virgil Ray Forester, President, Woman's Auxiliary to the Oklahoma State Medical Association, presiding.

CALL TO ORDER: Mrs. Forester.

INVOCATION: Mrs. Iron Hawthorn Nelson, Past President, Woman's Auxiliary to Oklahoma State Medical Association.

PLEDGE OF LOYALTY: Mrs. W. A. Hyde, Second Vice-President, Woman's Auxiliary to the Oklahoma State Medical Association.

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

WELCOME: Mrs. Thomas L. Ozment, President, Tulsa County Medical Auxiliary.

GREETINGS: Clinton F. Gallaher, M.D., President-Elect, Oklahoma State Medical Association.

Mrs. Elias Margo, First Vice-President, Woman's Auxiliary to the Southern Medical Association. *Sponsors:* Mrs. Joseph W. Kelso, Past-President, Woman's Auxiliary to the Southern Medical Association; Mrs. Thomas L. Ozment, President, Woman's Auxiliary to the Tulsa County Medical Society.

GUEST-SPEAKER: Mrs. Harlan English, President-Elect, Woman's Auxiliary, American Medical Association. *Sponsors:* Mrs. Neil W. Woodward, Past-President and National Civil Defense Chairman and Mrs. Thomas L. Ozment, President, Woman's Auxiliary to the Tulsa County Medical Society.

IN MEMORIAM: Mrs. Milton L. Berg, First Vice-President, Woman's Auxiliary to the Oklahoma State Medical Association, assisted by Mrs. R. A. Liebendorfer, accompanied by Mrs. C. T. Thompson.

ANNOUNCEMENTS BY GENERAL CHAIRMAN OF CONVENTION, Mrs. Eric M. White.

ROLL CALL BY COUNTIES: Mrs. John W. Records, Treasurer, Woman's Auxiliary to the Oklahoma State Medical Association.

TREASURER'S REPORT: Mrs. Records and Mrs. Louis S. Frank, Treasurer-Elect, Woman's Auxiliary to the Oklahoma State Medical Association.

READING AND ADOPTION OF THE MINUTES: Mrs. Charles W. Freeman, Secretary, Woman's Auxiliary to the Oklahoma State Medical Association.

REPORT OF THE CREDENTIALS COMMITTEE: Mrs. Frank L. Flack, Tulsa; Mrs. John A. Blaschke, Oklahoma City.

REPORTS AND INTRODUCTION OF OFFICERS AND CHAIRMEN:

First Vice-President, Mrs. Milton L. Berg
Second Vice-President, Mrs. W. A. Hyde

Corresponding Secretary, Mrs. Harrell C. Dodson, Jr.
Chairman of Councilors, Mrs. Worth M. Gross
Chairman of Members-At-Large, Mrs. Charles Graybill
Parliamentarian, Mrs. Clifford M. Bassett
Historian, Mrs. Charles A. Smith
Editor, Mrs. Samuel T. Moore
Co-Editor, Mrs. John Powers Wolff
Press and Publicity, Mrs. Charles Stuard
American Medical Education Foundation, Mrs. F. H. McGregor
Civil Defense, Mrs. Neil Woodward
Community Service, Mrs. Tom C. Sparks
Doctors' Day, Mrs. Joseph J. Maril, Editor for Auxiliary Page in *Oklahoma State Medical Journal*
Doctor's Hobby, Mrs. Wm. R. R. Loney
Co-Chairmen,
Mrs. Herbert J. Forrest
Mrs. William B. Renfrow
Finance-Budget, Mrs. John Cunningham
Legislation and Key Women, Mrs. Joseph W. Kelso
Loan Fund, Mrs. E. Clyde Mohler
Mental Health, Mrs. Richard Witt
National Bulletin, Mrs. Lawrence Thompson, Jr.
Paramedical Careers,
Chairman, Mrs. J. N. Owens, Jr.
Co-Chairman, Mrs. Francis Pruitt
Program-Health Education, Mrs. Peter A. MacKercher
Safety, Mrs. Robert S. Ellis
Student American Medical Auxiliary, Mrs. C. F. Foster, Jr.
Hospitality, Mrs. Walter K. Hartford
Co-Chairmen:
Mrs. A. M. Brewer
Mrs. George Guthrey
Mrs. Henry C. Traska
Mrs. William Best Thompson
Mrs. Ira O. Pollock
Mrs. William Reiff
Revisions and Resolutions, Mrs. Clinton F. Gallaher
Special Projects, Mrs. Robert J. Morgan

REPORT OF THE NOMINATING COMMITTEE, Mrs. Pat Fite, Sr., President-Elect, Woman's Auxiliary to the Oklahoma State Medical Association.

ANNOUNCEMENTS

ADJOURNMENT

1:00 p.m.—LUNCHEON, FASHION SHOW, Topaz Room, Tulsa Hotel, in honor of Mrs. Virgil Ray Forester, President, Woman's Auxiliary to the Oklahoma State Medical Association and Mrs. Pat Fite, Sr., President-Elect, Woman's Auxiliary to the Oklahoma State Medical Association.

SPECIAL GUESTS:
Mrs. Harlan English, President-Elect, Woman's Auxiliary to the American Medical Association
Mrs. Neil Woodward, Civil Defense Chairman, Woman's Auxiliary to the American Medical Association
Mrs. E. Clyde Mohler, Area Legislative Chairman, Woman's Auxiliary to the American Medical Association, and
Mrs. Elias Margo, First Vice-President, Woman's Auxiliary to the Southern Medical Association

INVOCATION: Mrs. George H. Garrison, Past-President Woman's Auxiliary to the Oklahoma State Medical Association and Past National Treasurer Woman's Auxiliary to the American Medical Association

HARPIST—Judith Henry, daughter of Doctor and Mrs. Millard Henry.

FASHIONS BY NAN PENDLETON'S SHOP.
POODLE PRESENTATION BY MEMBERS.

TUESDAY, MAY 9, 1961

9:00 a.m.—REGISTRATION AND INFORMATION, Mezzanine Studio Room, Mayo Hotel. Coffee and Rolls will be served.

10:00 a.m.—GENERAL MEETING, Emerald Room, Mezzanine, Mayo Hotel, Mrs. Virgil Ray Forester, President, Presiding.

CALL TO ORDER: Mrs. Forester.
INVOCATION: Mrs. Clinton F. Gallaher, Past-President, Woman's Auxiliary to the Oklahoma State Medical Association.
PLEDGE OF LOYALTY: Mrs. John Powers Wolff, Past-President, Woman's Auxiliary to the Oklahoma State Medical Association.

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

WELCOME: Mrs. Leonard Kishner, Tulsa County Medical Auxiliary, President-Elect.
GREETINGS: Walter E. Brown, M.D., President, Oklahoma State Medical Association.
INTRODUCTIONS: Clinton Gallaher, M.D., President-Elect to the Oklahoma State Medical Association.
Advisory Board:
Doctor Alfred T. Baker
Doctor Clifford M. Bassett
Doctor R. Q. Goodwin
Doctor C. F. Foster, Designer of furnishings to Auxiliary Room in Oklahoma State Medical Building.
GUEST SPEAKER: Mrs. Elias Margo, First Vice-President, Woman's Auxiliary to the Southern Medical Association.

ROLL CALL BY COUNTIES: Mrs. John W. Records, Treasurer, Woman's Auxiliary to the Oklahoma State Medical Association.

REPORTS: COUNTY PRESIDENTS:

Atoka-Bryan-Coal — Mrs. W. K. Haynie
Carter-Love-Marshall — Mrs. Lyman C. Veazey
Cleveland-McClain — Mrs. Kenneth H. Bagwell
Comanche — Mrs. Frank H. Austin
Craig-Ottawa — Mrs. Charles W. Letcher
Cookson — Mrs. Ed L. Pointer
Custer — Mrs. Glen P. Dewberry
East Central — Mrs. Glen L. Berkenbile
Garfield-Kingfisher — Mrs. I. L. Sheets
Grady-Caddo — Mrs. Robert E. Herndon
Kay-Noble — Mrs. John F. DeJarnette, Jr.
Kiowa-Washita — Mrs. Robert S. Phelan
Pottawatomie — Mrs. Robert Zumwalt
Oklahoma — Mrs. Joseph Funnell
Okmulgee — Mrs. Jack P. Myers
Payne-Pawnee — Mrs. R. D. Hargrove
Pittsburg — Mrs. F. T. Bartheld
Pontotoc-Johnson-Murray — Mrs. Carl D. Osborn
Rogers-Mayes — Mrs. C. B. Pinkerton
Stephens — Mrs. J. D. Weedn
Tulsa — Mrs. Thomas L. Ozment
Washington-Nowata — Mrs. V. M. Lockard

REPORT OF CREDENTIALS COMMITTEE: Mrs. Frank L. Flack; Mrs. John A. Blaschke.

REPORT OF FINANCE AND BUDGET COMMITTEE: Mrs. John Cunningham.

OLD BUSINESS

NEW BUSINESS

ELECTION OF DELEGATES TO NATIONAL CONVENTION

ELECTION OF OFFICERS

INSTALLATION OF OFFICERS: Mrs. Clifford M. Bassett, Past-President Woman's Auxiliary to the Oklahoma State Medical Association.

PRESENTATION OF PAST PRESIDENT'S EMBLEM: Mrs. Bassett.

PRESENTATION OF PRESIDENT'S PIN AND GAVEL: Mrs. Virgil Ray Forester.

ANNOUNCEMENTS: Mrs. Eric White, General Chairman of Convention.

ADJOURNMENT

1:00 p.m.—LUNCHEON—POST SCHOOL OF INSTRUCTION, Founder's Room, Mezzanine, Mayo Hotel, Mrs. Pat Fite, Sr., Presiding.

8:30 p.m.—ANNUAL DANCE, Crystal Ball Room, Mayo Hotel.

CONVENTION COMMITTEES

MRS. ERIC M. WHITE, *Chairman*
MRS. DICK HUFF, *Co-Chairman*

Registration — Mrs. L. E. Thompson
Credentials — Mrs. Frank Flack
Courtesy — Mrs. Walter Sethney
Hospitality — Mrs. Worth Gross
Luncheon — Mrs. Robert Grubb
Fashion Show — Mrs. W. H. Buchan
Tickets — Mrs. W. R. Turnbow
Past-Presidents — Mrs. Ollie McBride
Hobby Show — Mrs. Wm. R. R. Loney
Publicity — Mrs. C. G. Stuard
Mrs. George H. Miller

DECORATIONS

Mrs. C. F. Foster, Jr.
Mrs. Henry C. Traska
Mrs. Walter Hartford
Mrs. William Best Thompson
Mrs. Harrell C. Dodson, Jr.
Mrs. Erman Rawlings
Mrs. Dick Huff

Be Sure to Attend

THE POODLE LUNCHEON

Monday, 1 P.M.

May 8 **Mayo Hotel** **Topaz Room**

featuring Harpist Judith Henry

Fashions by Nan Pendleton

and

Poodle Presentation by Members

Oklahoma State Medical Assistants Society

Thirteenth Annual Meeting

May 5, 6, 7 **Hotel Tulsa**

Theme: "Study the Past—Act in the Present—Prepare for the Future"

FRIDAY, MAY 5

Mixer—Welcome: Sponsored by the Oklahoma County Medical Assistants.

SATURDAY, MAY 6

House of Delegates: Gertrude Habiger, outgoing President, Presiding—Morning, Lunch and Afternoon Sessions.

"Office Techniques": Panel and Workshop —afternoon; Moderator: E. L. Steffen, M.D., Enid; Sponsor: Garfield-Kingfisher Counties.

Annual Banquet: outstanding guest speaker, dining and dancing.

SUNDAY, MAY 7

Breakfast: Charles E. Green, M.D., Lawton physician and minister—Inspirational Message.

Installation of Officers: Sunday noon.

GENERAL INFORMATION

All medical assistants of the state, members or not, who are under the direct supervision of a physician (AMA member) are invited and encouraged to attend the Thirteenth Annual Meeting of the Oklahoma State Medical Assistants.

Registration fee for members, which covers Saturday luncheon, Saturday evening banquet, Sunday breakfast and lunch, as well as the Friday night reception, is $12.50 each. For non-members, the fee is $15.00.

Hotel reservations should be made directly with the Hotel Tulsa, and pre-registrations should be sent to Mrs. Doris Kirk, c/o E. N. Lubin, M.D., Doctors Building, Tulsa.

SOCIETY OFFICERS—1960-61

Miss Gertrude Habiger, Ponca City, President

Mrs. Jessie Meridith, Enid—President-Elect

Miss Edna Cline, Oklahoma City—1st Vice-President

Mrs. Bobbie Antrim, Oklahoma City—2nd Vice-President

Mrs. June Garrison, Bartlesville—Secretary

Mrs. Helen York, Enid—Treasurer

Board of Directors: Mrs. Nena Chadsey, Bartlesville; Miss Gerry Schwarz, Oklahoma City; Miss Pat Claiborne, Bartlesville; Mrs. Lou Fischer, Enid; Miss Carroll Short, Shawnee; Mrs. Jane Tompkins, Tulsa; Miss Ruth Ellis, Lawton; Miss Betty Raines, Muskogee; Miss Mary Alice Thomas, Henryetta; Mrs. Lois T. Evans, Ardmore; and Mrs. Faye Slayton, McAlester.

HOUSE OF DELEGATES: BUSINESS AFFAIRS

The following amendments and committee reports are brought to the attention of county medical societies. The items reported here represent those received in time for publication in advance of the meeting. Reports and proposals received subsequently will be reproduced and inserted in the portfolio now being prepared for each county society delegate.

Amendments to By-Laws

1. Amend Chapter VIII, Section 1.00, by deleting the word "and" which appears between the words "By-Laws" and "Grievance," by replacing the word "and" with a comma; and by adding the words "and Executive Committee." to the end of the sentence.

2. Amend Chapter VIII, by inserting a new Section 8.00 and by redesignating the present Section 8.00 as Section 9.00 to-wit:

"Section 8.00 EXECUTIVE. The Council shall appoint the members of the Executive Committee, based upon nominations submitted by the President."

3. Amend Chapter IX, Section 4.01, by replacing the clause beginning with the word "whose" and ending with the figure "$5,-000.00" by the clause "who have restrictive income," and by inserting the words "any physician" between the words "or" and "who" in line five.

Committee Reports

STATE LEGISLATIVE COMMITTEE

Report to the House of Delegates

May 7, 1961

Committee Members

R. Q. Goodwin, M.D., *Chairman*
Orange M. Welborn, M.D. James Harold Tisdal, M.D.
Louis H. Ritzhaupt, M.D. M. Haskell Newman, M.D.
Ceylon S. Lewis, Jr., M.D.

At the date necessary for Committee Reports to be submitted for publication in the *Journal,* the State Legislative Committee is in the unfortunate position of not being able to look into the crystal ball and give all the answers.

The Committee can report at this time that the most important measure before the Legislature of interest to the medical profession is Senate Bill 81, introduced by Senator Charles Wilson of Beckham County. This bill, a copy of which has been sent to all county medical societies, would put into effect a county medical examiners system in place of the present county coroner system for the purpose of determining the cause of death, when needed.

In addition to the above, the medical school, Public Health Department and the Mental Health Department have the problem of working out their programs under Governor Edmondson's proposed A and B Budgets.

Your Committee will submit a more detailed report to the House of Delegates.

FEDERAL LEGISLATIVE COMMITTEE

Report to the House of Delegates

May 7, 1961

Committee Members

J. R. Stacy, M.D., *Chairman*
Tom S. Gafford, M.D. Worth N. Gross, M.D.
Clinton Gallaher, M.D. J. Hoyle Carlock, M.D.
Paul B. Lingenfelter, M.D. William N. Harsha, M.D.
William B. Matthey, M.D.

Soon after its appointment, your committee faced a severe test in marshalling action against the passage of H.R. 4700, the Forand Bill. Hundreds of letters and telegrams were sent to key legislators from Oklahoma physicians and their allies.

The bill met its demise at the hands of the House Ways and Means Committee by a vote of 17-8. Also receiving negative treatment from the committee was a Republican

Administration bill to take care of the aged through a rather unrealistic indemnity program.

In lieu of these legislative proposals, the House Ways and Means Committee, with the backing of organized medicine, adopted a compromise measure entitled the Kerr-Mills Bill, or H.R. 12580. Co-authored by Senator Robert S. Kerr and Representative Wilbur Mills, the bill, now Public Law 86-778, makes additional Federal matching funds available to bolster state welfare health programs, and also provides matching funds for state operated medical care plans for those over 65 who are not pensioners, but temporarily medically indigent.

The Oklahoma Department of Public Welfare implemented P.L. 86-778 in October of last year. The increase in Federal matching funds has extended this source of government-sponsored medical care in Oklahoma from $11 million annually to $27 million.

About ten states have implemented the law along with Oklahoma, and it is anticipated that the others will follow suit as soon as their legislatures find ways of raising state funds with which to match Federal.

Shortly after the passage of P.L. 86-778 a new Administration came into power, and with it a new legislative proposal to offer tax paid health care to social security recipients . . . a modification of the old Forand Bill.

Referred to as the Anderson-King Bill, H.R. 4222 provides 14.5 million social sesurity beneficiaries with the following benefits:

1. Up to 90 days of in-patient hospitalization, subject to a deductible of $10 for each of the first nine days.

2. Up to 180 days of skilled nursing home services.

3. Up to 240 visits annually from visiting nurse services.

4. Out-patient hospital diagnostic services, subject to a deductible of $20 for each complete study.

Significantly, physicians' services are excluded from the bill, with the notable exception of physicians salaried by hospitals.

Representatives of your committee and officers of the state association recently attended a Medical Legislative Conference of the AMA, where we were told by Senator Kerr that the fate of H.R. 4222 rests with the House Ways and Means Committee. Kerr, who is strongly opposing the Anderson-King Bill, observed that Ways and Means Chairman Wilbur Mills and his committee members are our best hope to block this dangerous and unnecessary legislation.

He warned organized medicine that apathy would surely result in the passage of the bill, but said he believed that a concerted effort, plus the conservative attitude of the House Ways and Means Committee, would result in victory during this Congress and possible the next.

At the AMA meeting, the issues of the controversy were explained, the positions of the AMA, Blue Shield, National Association of Manufacturers and the Farm Bureau outlined, and organized medicine's public relations and legislative plans and materials were reviewed.

To meet the challenge at the Oklahoma level, your committee now has plans underway to:

1. Keep the profession informed on the legislative situation by mailing periodic news letters.

2. Develop an active Speaker's Bureau to cover the state on selected socio-economic subjects.

3. Form an alliance with other organizations which share the same philosophy.

Finally, your committee urges full cooperation from each member of the Association, as well as the Auxiliary, in implementing legislative interest at the local level. Politics begin in the precincts, and it is there that the most can be accomplished.

GRIEVANCE COMMITTEE
Report to the House of Delegates
May 7, 1961
Committee Members

Bruce R. Hinson, M.D., *Chairman*

John F. Burton, M.D.	R. Q. Goodwin, M.D.
E. C. Mohler, M.D.	Alfred T. Baker, M.D.

As all of you know, the Constitution and By-Laws of the Oklahoma State Medical Association creates the Grievance Committee to be made up of the immediate five past presidents living in the State of Oklahoma.

The Grievance Committee has met on the second Sunday of each month with the exception of the summer months, and with one exception when the complaints before the Committee did not warrant a meeting.

During the year 1960-61 your committee considered thirty-one cases of which twenty-five have been closed and of course six are current.

Of the cases considered by the committee, they fall into three main categories: fees, lack of medical attention, and civic criticism of local hospital and medical care.

While the committee would be presumptuous to assume it had settled all cases to the satisfaction of all concerned, it would nevertheless make the comment that in its opinion the spirit of cooperation on the part of both parties in a complaint has been to try to develop a better understanding between the Medical Profession and the Public.

Your committee will continue its efforts to bridge this gap.

PROFESSIONAL LIABILITY COMMITTEE
Report to the House of Delegates
May 7, 1961
Committee Members

Ralph A. Smith, M.D., *Chairman*

C. A. Traverse, M.D.	C. E. Woodard, M.D.
Edward L. Moore, M.D.	E. C. Yeary, M.D.
Homer A. Ruprecht, M.D.	Dave B. Lhevine, M.D.
Port Johnson, M.D.	Curtis Berry, M.D.
John M. Carson, M.D.	W. A. Matthey, M.D.

Your Professional Liability Insurance Committee chairman is glad to report that we have had no catastrophies in the past year.

The committee members have responded excellently whenever called upon to meet on behalf of one of our members. During the year the counsel representing our doctors and Saint Paul-Mercury in Tulsa has been changed from Rucker, Tabor, Best, Sharp and Shepard to the firm of Houston, Klein and Davidson.

As always the majority of problems confronting us have been aggravated by criticism of one doctor for the work of another. In spite of newspaper and feature stories concerning claims and judgments over the country, we have as yet received no letter suggesting a change of rates.

MEDICAL SCHOOL LIAISON COMMITTEE
Report to the House of Delegates
May 7, 1961
Committee Membership

Gregory E. Stanbro, M.D., *Chairman*

R. R. Hannas, M.D.	Cleve Beller, M.D.
Robert W. Lowrey, M.D.	W. R. Cheatwood, M.D.
J. H. Tisdal, M.D.	Peter E. Russo, M.D.
Robert G. Perryman, M.D.	John R. Taylor, M.D.
S. N. Stone, Jr., M.D.	Wendell L. Smith, M.D.

The Medical School Liaison Committee met on two occasions during the past year, both times concentrating its concern on the profession's responsibility to assure a continuing supply of well-qualified physicians.

For the past decade there has been a striking, nationwide reduction in both the number and quality of college students making application for admission to the freshman classes of our medical schools. While the drop in number of qualified applicants is in itself serious, more alarming is the fact that large numbers of applicants now possess only the minimum scholastic standards required for medical school admission.

This has become a matter of concern to our schools of medicine throughout the nation, and has been brought to the attention of the Medical School Liaison Committee of the Oklahoma State Medical Association by the very able and dedicated Dean of our Medical School, Doctor Mark R. Everett.

After adequate discussion concerning this problem, it is the opinion of your Medical School Liaison Committee that an active recruitment program for well qualified students interested in studying medicine should be instituted by the Oklahoma State Medical Association in the immediate future. It is our opinion that such a program should be carried out at both the highschool and college levels. It is felt that members of the Oklahoma State Medical Association can best influence highschool students to study medicine as they contact these young people in their role of family physician and counselor, while it is felt that college students can best be reached by a cooperative effort on the part of the University of Oklahoma School of Medicine and the Oklahoma State Medical Association.

Recommendations

In order that this program shall be promptly and systematically instituted, the following recommendations are made to the House of Delegates by the Medical School Liaison Committee:

1. That each councilor shall appoint within his district, a team or teams of physicians, who shall be available to discuss with interested highschool students the basic requirements for medical school admission. The President or Executive Secretary of the Oklahoma State Medical Association shall notify the principal of each highschool that such groups exist, urge their use, and inform these principals who such physicians are in their respective area. In order that the material presented shall have uniformity and be factual, the Liaison Committee shall prepare a brochure listing requirements for entrance to a medical school. This brochure shall also contain tuition costs for medical schools in and adjacent to the State of Oklahoma. While it is recognized that some students, because of family ties or religious affiliation, may not choose to enter the University of Oklahoma School of Medicine, it is hoped that the several advisory teams will urge these young people to consider the University of Oklahoma as their school of choice.

2. The Dean of the University of Oklahoma School of Medicine shall be requested to inform the Liaison Committee of the State Medical Association of the various steps that he considers most effective for raising the level of interest among college students in our various four-year colleges, concerning a career in medicine. The Oklahoma State Medical Association shall pledge its assistance in carrying out such a program, giving aid through its administrative offices, local societies or committees that may be peculiarly adapted to this endeavor.

3. Recognizing that opportunities for financial assistance to students who are undertaking a career in medicine are more limited than those who are seeking the doctorate in various other physical and biological sciences, it is recommended that the Oklahoma State Medical Association, through its appropriate committees, give serious consideration to some means of providing financial assistance to worthwhile Oklahoma students who require such aid for the completion of their medical career.

4. It is further recommended that in order to insure continuity of this program, the Medical School Liaison Committee be permanently constituted and that the function of Medical Education Encouragement be assigned to this committee.

POSTGRADUATE EDUCATION COMMITTEE
Report to the House of Delegates
May 7, 1961

Committee Membership

R. R. Hannas, M.D., *Chairman*

Irwin H. Brown, M.D.	George R. Smith, M.D.
Thornton Kell, M.D.	C. K. Holland, M.D.
Roy W. Donaghe, M.D.	David Ramsay, M.D.
L. M. White, M.D.	Robt. M. Shepard, Jr., M.D.
V. C. Merrifield, M.D.	Elvin M. Amen, M.D.
Gilbert W. Tracy, M.D.	R. M. Wadsworth, M.D.

The Committee on Postgraduate Education has the following to report:

Regional Postgraduate Courses

Three programs have been held this year, one in Ponca City on the Kidney, one in Law-

ton on the Lung, and one in Muskogee on the Kidney, and all have been well received. Of the $1,200 allotted for this purpose by the House of Delegates in May, 1960, only approximately $300 has been spent. It is hoped that more of these programs may be held next year as will be outlined in the Recommendations at the conclusion of this report.

Round Table Postgraduate Course

As authorized by the House of Delegates in May, 1960, a round table, seminar-type postgraduate course was sponsored by this organization in conjunction with the University of Oklahoma School of Medicine at the medical school in December, 1960. Twenty-one doctors attended and several unsolicited letters were received from those who attended complimenting the course highly. Both faculty and those in attendance were impressed that this method of teaching postgraduate courses is excellent and could be applied to other courses held at the University or elsewhere. The $500 allotted by the House of Delegates was utilized in full to assist in covering the expenses of this course. The Committee feels that the purpose of this project has been fulfilled, namely, to demonstrate the usefulness of this type of teaching, and that this method may be used successfully for any course for which the University deems it applicable, and therefore we are not recommending the repeating of this project.

Postgraduate Television Programs

Negotiations are under way with the educational television station at the University of Oklahoma in Norman to produce and televise postgraduate courses to those physicians of the state able to receive Channel 13. It is felt that by utilizing the experience gained in other states which have courses in progress now, we in Oklahoma may be able to come up with a very satisfactory program of home postgraduate courses. A recommendation concerning this proposal follows.

Disaster Medical Care

It is hoped that this Committee, in conjunction with the Civil Defense Committee, can assist to provide a series of Disaster Medical Care Instructional Courses in cooperation with county medical societies during the coming year.

Loans, Scholarships and Grants-in-Aid

In view of the fact that there has been a decrease in the number and quality of applicants for admission to medical schools and that the medical profession is feeling strong competition from other scientific fields for the top-notch students required to make good physicians; in view of the fact that present loan funds, scholarships and grants-in-aid at the University of Oklahoma Medical School are extremely limited; in view of the fact that pressure is being applied to promote this type of assistance at the Federal government level and the AMA level (a $20 per year increase in AMA dues for this purpose has been proposed and only a very small percentage of this would be available to our state) because it is not now available; and in view of the fact that some 28 other states are already ahead of us in this field, your Committee feels that this Association should, by means of a small dues increase, sponsor a loan, scholarship, and grant-in-aid program which will encourage and enable more and better students to attend the University of Oklahoma School of Medicine and become better practicing physicians in this state.

Recommendations

1. That the Regional Postgraduate Courses started this year be continued next year on a monthly basis from September through April, and that $1,200 be allotted by the Oklahoma State Medical Association to be used, if needed, in support of this program.

2. That the Oklahoma State Medical Association agree to sponsor, in conjunction with the University of Oklahoma School of Medicine, a series of television programs

utilizing the services of the Educational Television Service at the University of Oklahoma, with no funds to be appropriated by this Association for this purpose until such time as expenses may be accurately estimated and other means of financing explored.

3. That a loan, scholarship, and grant-in-aid fund be established at the University of Oklahoma School of Medicine to be known as the Oklahoma State Medical Association Loan and Scholarship Fund; this fund to be provided by a State Association dues increase at $5.00 per year per member; $3.00 of which is to be used for the establishment of a Loan Fund, and $2.00 of which is to be used for scholarships and grants-in-aid; and that such monies appropriated by the OSMA for this purpose shall be available for distribution by the University of Oklahoma School of Medicine with the advice and counsel of the immediate past-president of this Association, and that if the House of Delegates of the OSMA votes this increase in dues of $5.00, it shall be set aside in a special fund for the purposes described above. Monies loaned by this Fund shall be repaid within five years of graduation from medical school and shall bear 2% interest annually, beginning one year after the borrower graduates from medical school. All loans, scholarships, and grants-in-aid awarded under this program shall be reviewed each year by the Postgraduate Education Committee of the OSMA and a report shall be made to the Council and House of Delegates, and this program shall be re-evaluated at the end of five years and such changes recommended as are deemed necessary.

COMMITTEE ON PUBLIC WELFARE
Report to the House of Delegates
May 7, 1961

Committee Membership

A. T. Baker, M.D., *Chairman*
Mark R. Johnson, M.D. George H. Garrison, M.D.
Richard Burgtorf, M.D. E. M. Gullatt, M.D.
E. H. Shuller, M.D.

The Public Welfare Committee first met in Norman, Oklahoma, on June 9, 1960. This meeting was called at the request of Doctor Mark Johnson, then a member of the Professional Advisory Committee to the Department of Public Welfare, who explained the general financial problem of the Department of Public Welfare which was necessitating a 20% cutback in monetary payments effective August 1, 1960.

The committee adopted a program to solve this problem that had been evolved by Doctor Johnson, and this program was transmitted to the President of the Oklahoma State Medical Association for action.

At a called meeting of the Delegates of the Oklahoma State Medical Association on July 31, 1960, the plan of Doctor Johnson, approved and recommended by this committee was disapproved; but no constructive action was taken by the delegates prior to the loss of a quorum.

The meeting of the Welfare Committee on October 24, 1960, concerned itself with the lack of communication between the Professional Advisory Committee to the Department of Public Welfare, and the Public Welfare Committee of the Oklahoma State Medical Association and also with the State Association Headquarters. A solution has not been found.

On February 12, 1961, the Welfare Committee discussed:

1. Operation "Echo" — Oklahoma State Hospital Association, Inc.
2. Payment of service to Crippled Children's Program.
3. Possible abuse of "paid" visits to nursing home patients.
4. Inclusion of drugs in the Welfare Medical Care Program.

This committee recommends that the House of Delegates reaffirm its original attitudes regarding the Medical Care Program for Welfare recipients, to-wit:

1. That family and community responsibility should be nurtured and preserved.
2. That patient-physician relationship should remain unaltered; and
3. That monetary assistance from tax funds should be acknowledged as an ultimate and not a primary resource.

It was the sentiment of this committee that if the state becomes involved in such an expensive venture as a drug program for OAA and MAA recipients, such a program should be limited to prescription items as defined by State and Federal laws, specifically to exclude all items which can be purchased without prescriptions.

This committee recommends to the Delegates that action be taken to implement the previous recommendations of the committee, that payment for services rendered to children be made by the Welfare Department.

This committee believes that the Delegates prior to any action should review the action of the House of Delegates at a called meeting on July 21, 1957, at which time the following was approved as a basis for the participation of the members of the Oklahoma State Medical Association and as a guide for the State Association Members of the Professional Advisory Committee to the Department of Public Welfare; and defining the terms upon which full cooperation of the medical profession could be anticipated, to-wit:

1. Recipients will have free choice of physicians.
2. All physicians will maintain the right to accept or reject Welfare patients.
3. The program would be an in-patient and hospital care program in licensed general hospitals with admissions to be on a life-in-danger admission policy (the definition for this, the patient would have to be in a medical condition that would be considered to the extent that life was actually in danger).
4. Authorization for admission would be for a period of seven days with reauthorization for another seven days possible under certain circumstances when life was still in danger.
5. Physicians to be paid on the basis of seventy-five per cent of the Medicare fee schedule for surgery, and $5 a day for acute non-surgical conditions with a limit of ten days on each admission.
6. The Association not enter into a written contract with the Department of Public Welfare.
7. In no instance will the obligation of the patient be discharged since this is considered as a resource program and not an indemnity program.
8. The check for payment of the physician's services will be made out to the physician and to the recipients and will require double endorsement.
9. That in instances where a welfare patient might have prepaid insurance which would reimburse the physician in an amount greater than the schedule to be paid by the Department of Public Welfare, it shall be left to the physician as to which method of payment he will elect to accept, but in no instance accepting both.

COMMITTEE ON OCCUPATIONAL HEALTH

Report to the House of Delegates May 7, 1961

Committee Membership

Charles M. O'Leary, M.D., *Chairman*

N. F. V. Barkett, M.D.	Earl D. McBride, M.D.
Kieffer Davis, M.D.	Tom H. Mitchell, M.D.
Nevin W. Dodd, M.D.	Robert G. Perryman, M.D.
Wilkie D. Hoover, M.D.	David Ramsay, M.D.
J. J. Maril, M.D.	Wm. Best Thompson, M.D.

Purpose

The several purposes of this committee are: To serve as a liaison group between industry, labor and the profession; to conduct educational programs for the profession on the subject of occupational medicine; and to initiate any special projects designed to im-

prove understanding of this specialty and/or enhance rapport between the various groups of interest.

Activities

Your committee recognizes that the role of occupational health programs, as well as the role of those engaged in such activity, are commonly misunderstood, both within and without the profession.

Of direct interest to the profession, and one of the contributing factors to misunderstanding, is the problem of systemizing the ethical referral of physicians who desire to participate in company health programs. Positive medical leadership is required for our membership, and for employers who have a valid and sincere interest in protecting and maintaining the health of their employees, if necessary occupational medical services are to be provided at either a place of employment or other effective, convenient location.

Recommendations

With this particular problem in mind, your committee has requested pilot surveys in Oklahoma and Tulsa Counties, in which the physicians in these metropolitan areas will be asked to complete questionnaires regarding their willingness and qualifications for participating in occupational health work. By using such a technique, it is felt that the following may be accomplished:

1. Medical ethics need not be broached, since interested physicians will not be placed in a position of directly soliciting industrial health work.

2. The county medical societies may furnish the names and qualifications of interested physicians to employers on request, or may offer to be of service to new industry locating within the immediate area.

If the Oklahoma and Tulsa County surveys are undertaken and prove successful, your committee will next consider suggesting the employment of the same technique in other counties, as well as establishing a records system at the state level.

PREPAID MEDICAL CARE COMMITTEE

Report to the House of Delegates

May 7, 1961

Committee Members

Frank J. Nelson, M.D., *Chairman*
Vernon M. Lockard, M.D. — R. B. Howard, M.D.
W. Carl Lindstrom, M.D. — Kenneth L. Wright, M.D.
Robert T. Sturm, M.D. — R. G. Obermiller, M.D.
Donald Olson, M.D. — Leland F. Shyrock, M.D.
B. C. Chatham, M.D.

During the past year, your committee has worked closely with representatives of Blue Cross-Blue Shield toward the common objective of improving the coverage of these voluntary, prepaid plans, with particular emphasis on the Blue Shield aspect.

The committee's activities may be grouped into three categories: Review of Extended Benefits Coverage; Evaluation of the Compensability of Certain New Procedures; and, Revision of the Blue Shield Schedule of Allowances.

Review of Extended Benefits Coverage

Early in the Fall, your committee's judgment on problems associated with the Extended Benefits Program was sought by Blue Shield and the following recommendations were made:

1. In the absence of an established laboratory or pathological diagnosis of malignancy, certification of the case for payment would be subject to review by a physician's committee which may, at its discretion, request consultation in the establishment of the diagnosis.

2. Regarding payment for "Post Polio Complications" where there is no established laboratory or pathological diagnosis, your committee recommended that payments not be made in such cases.

3. Your committee recommended that payment for encephalitis cases be limited to "acute viral encephalitis."

These recommendations have been transmitted to the Blue Cross-Blue Shield Boards and it is reported that they will receive consideration this month.

Compensability of New Procedures

Blue Shield has also brought to your committee's attention several new procedures for which Blue Shield Benefits were not established. Although recommendations were made by your committee at the time the problems were presented, a subsequent development occurred, as reported in the following section of this report, which will automatically take care of the inclusion of such new procedures.

Revision of the Blue Shield Schedule of Allowances

For several months, your committee and a special sub-committee comprised of Doctors Howard, Lindstrom and Lockard, have been studying the entire Blue Shield schedule of allowances, in the light of developing a system to equitably modernize the fee structure.

The sub-committee has met on several occasions, has consulted with representatives of various specialty societies, and the committee-as-a-whole has carefully considered and approved the final recommendations, which follow:

1. It is recommended that the California Relative Value Schedule be adopted as a basis upon which to structure the Blue Shield allowances (anesthesia on a time basis). Changes may be made at the suggestion of specialty organizations or members-at-large.

2. It is recommended that unit values of $3.00, $3.50, and $4.00, respectively, be applied to the California Schedule, thereby creating three sets of Blue Shield allowances. Even larger unit values might be used in certain areas, provided they would be in keeping with a saleable premium.

3. It is recommended that Blue Shield implement these schedules in accordance with its best judgment; but it is also recommended that the scope of the benefits offered should be directly related to the cost of medical practice in the various economic areas of the state, to the extent that an individual may insure himself against approximately 80-85% of the cost of professional services in his community. If such a liberalization of Blue Shield fees were accomplished, the doctor would be in a position to individually apply the service principle, if he so desired.

4. It is recommended that Blue Shield determine the economic areas of the state on the basis of its records which indicate average billed charges. An equitable differentiation in the costs of medical practice, by geographic area, could be made from present Blue Shield records.

5. It is recommended that this program be placed into effect by Blue Shield as soon as possible; and it is requested that the final plan approved by the Blue Shield Board be presented to the judgment of the Oklahoma State Medical Association Committee.

6. It is recommended that the fee schedules not be printed, but that information regarding the basis of determination, including the relationships of the three sets of allowances to the average charges in each economic area, be made available to necessarily interested parties.

7. It is recommended that the President of the Oklahoma State Medical Association request the House of Delegates to clarify the question: "Are service contracts by counties or income bracket in accord with the policy of the State Medical Association?"

COMMITTEE ON AGING
Report to the House of Delegates
May 7, 1961

Committee Membership

J. Walker Morledge, M.D., *Chairman*

Samuel C. Shepard, M.D.	C. E. Bates, M.D.
Leonard P. Eliel, M.D.	Mr. Paul Snelson
John W. DeVore, M.D.	Herbert Kent, M.D.

Your committee began its year with an all-out effort on the Oklahoma Conference on Aging. This conference, held June 7-9, in Norman, was the state-level forerunner of the President's White House Conference on Aging, held January 9-12, 1961, in Washington, D.C.

In preparation for the Oklahoma confer-

ence, many Committee on Aging members participated in the development of fact-finding reports. Immediately prior to the meeting in Norman, an appeal was made to committee members and the Woman's Auxiliary to attend the conference, and thereby assure the Oklahoma State Medical Association of adequate professional representation.

The response to the appeal was more than gratifying; of the four hundred conference registrants, over fifty were physicians or auxiliary members. Organized medicine was well represented in all of the section meetings and in the general session which concluded the conference.

Since the recommendations emanating from the conference were printed in the July, 1960 issue of *The Journal,* they will not be reported again here. However, it is significant to note that the Oklahoma Conference went on record as opposing the use of the Social Security mechanism to finance health care. The vocal participation of physicians in the debate of this issue, and the advance preparation of your Committee, were largely responsible for the outcome of the vote.

The National Conference

As in the case of the Oklahoma Conference, the proceedings of the President's White House Conference were reported in the February, 1961 issue of *The Journal.* The outcome of the national meeting, however, was disappointing since the Section on Income Maintenance (including the financing of health care costs) went on record in favor of Social Security health legislation. While other sections of the meeting took an opposite view, the action of this significant group will undoubtedly be used to advantage by supporters of HR 4222, the current legislative proposal to socialize care for the elderly.

Despite the unhappy turn of events nationally, the interest of Oklahoma physicians was rewarded when six of Oklahoma's twenty-four delegates slots were filled by physicians. Past-President A. T. Baker, M.D. and an Oklahoma City dentist represented Oklahoma in the controversial Income Maintenance Section, both of whom voted against the Social Security measure.

Committee Recommendations

1. Your committee observes that many worthwhile recommendations to improve the health care of the aged evolved from both conferences, and recommends continued interest and action on the part of the Oklahoma State Medical Association.

   a. The recommendations, particularly those aimed at state and local participation, should be studied and screened by the succeeding OSMA Committee on Aging, and next year's efforts should be concentrated on one or two practical objectives.

2. Your committee recommends that a statewide study be undertaken in Oklahoma, to determine the scope of care presently available to the elderly and to advise any corrective action which may be shown to be necessary.

3. Your committee urges all county medical societies to develop or accelerate their interest in the health and welfare problems of the aged at the community level, since it is felt that community action is the starting place for providing optimum health care for people of all ages.

MENTAL HEALTH COMMITTEE
Report to the House of Delegates
May 7, 1961

Committee Membership

George H. Guthrey, M.D., *Chairman*

Wayne Johnson Boyd, M.D.	Frank Adelman, M.D.
T. Glyne Williams, M.D.	W. C. McCurdy, M.D.
S. C. Shepard, M.D.	Ray H. Lindsey, M.D.

The Mental Health Committee feels the following items are of prime importance for the present and future mental health needs of our state. We hope that the Oklahoma State Medical Association will go on record endorsing these recommendations and that they can be implemented particularly in the legislative department of our state government.

1. Competitive salaries for professional and non-professional employees. The base pay of our many non-professional employees in our state mental institutions is not nearly high enough to attract qualified persons. With adequate funds, more qualified professional and non-professional individuals could be actually engaged in treatment procedures. With better and more intensive treatment, a greater number of patients could be treated, and the turnover rate increased, thereby increasing the value received for each dollar spent.

2. Because of our lack of funds for hiring an adequate number of trained people, it has become imperative that we expand our training facilities for not only psychiatrists, but nurses, social workers, and clinical psychologists. These training programs which require additional funds are the only answer to our personnel shortage since it is nearly impossible to recruit these people from outside the state.

3. There is great need to increase after-care facilities. These after-care facilities include not only adequate out-patient services, but also day hospitals located in heavily populated areas. If the mental patient could receive treatment on a community level, fewer problems would arise along social and economic lines, and the tremendous shortage of bed spaces in our large mental institutions would be reduced. Also included in after-care services would be providing sheltered workshops for mental patients and the mentally retarded who require continued supervision rather than necessarily needing hospitalization. These workshops could allow patients to be productive and contribute to their own support and to the support of their families outside the institutional setting. Also followup of patients after their release from mental hospitals is an important phase of after-care, particularly social service departments in the various state institutions need strengthening with additional workers and more qualified people. These people could provide support to the patient and to the agencies in the community who are working with the patient after his release from the mental hospital.

4. Adequate funds for the establishment of a hospital or center for the treatment of emotionally ill children is sorely needed in our state. We have no such facility in existence at this time.

5. Special facilities are also needed for the treatment of alcoholics and drug addicts. At present there are no such facilities in our state.

6. Liberalizing of admission procedures to our various state institutions are also needed by means of modifying existing state mental health laws.

7. An important part of any growing and productive treatment center is an expansion and greater emphasis on research. This can be incorporated as a part of a training program in all the various state institutions.

8. With the increase of training facilities more psychiatrists can be available for practice in smaller towns and communities in our state; thereby, preventing much of the increasing load of patients requiring hospitalization. The training and treatment facilities at the Oklahoma University Medical Center are particularly needed. Currently there are only twenty in-patient beds at the medical center provided for psychiatry even though the building facilities have been completed for many years. The staffing of these beds is not possible with present appropriations. Expansion of these facilities would aid materially in providing necessary, trained personnel in our state.

9. A special center should be provided for treatment of criminally insane. This could best be accomplished by the establishment of a psychiatric treatment center at our state penitentiary at McAlester.

10. The State Medical Association could aid materially in the education of the public in regard to mental health principles by support and continued cooperation with the laymen's organizations, the Oklahoma State Association for Mental Health, which has chapters in sixty of our state counties.

REHABILITATION COMMITTEE

Report to the House of Delegates
May 7, 1961

Committee Members

Earl D. McBride, M.D., *Chairman*

James W. Kelley, M.D.
Joe L. Duer, M.D.
Ella Mary George, M.D.
Jack L. Richardson, M.D.
Moorman P. Prosser, M.D.
Francis E. Dill, M.D.
Clinton Gallaher, M.D.
Herbert Kent, M.D.
William W. Waldrop, M.D.
Donald W. Branham, M.D.
Lee K. Emenhiser, M.D.
Russell Harris, M.D.
Walter Scott Hendren, Jr., M.D.
William K. Ishmael, M.D.
Louis H. Ritzhaupt, M.D.

Last year, your Committee approved and reported the following recommendation:

> "A medical diagnostic rehabilitation facility (should) be established at the University of Oklahoma Medical Center, to which disabled individuals could, by proper referral, be evaluated en toto through a team approach of all medical specialists and co-medical personnel to determine and co-ordinate the individual's rehabilitation objective and treatment with the necessary cooperation of all private and public groups and agencies that might be so concerned."

Since that time, the Special Committee on Rehabilitation Services (State Legislative Council) has concurred in the recommendation of the Oklahoma State Medical Association committee.

Officials of the University of Oklahoma Medical Center have been consulted by the legislative group and a plan has been devised which appears to closely parallel the original recommendation of your committee. It is anticipated that a diagnostic and evaluation service will be initiated at the school in a limited way on July 1, 1961.

Legislation to authorize the establishment of this center is now being proposed. It is your committee's understanding that this legislation will require that all patients referred to the center must have first been seen by a practicing physician. Furthermore, the committee is told that all patients will be referred back to their local physicians for treatment or remedial surgery. Only those who require intensive rehabilitation programs not available through the local community will be treated at the center.

Since the final bill has not been submitted to your committee, this report does not request an endorsement of the program. Suffice it to request that your committee be authorized to continue to assist in the planning of this worthwhile undertaking.

Along this line, your committee has recently reviewed its original action, and has further delineated its position through the following interpretations:

1. Patients could be referred to this facility from any state or local agency, such as the Department of Public Welfare, Department of Vocational Rehabilitation, Industrial Commision, or State Health Department; or from a private physician.

2. The facility should be an evaluation center, so equipped with personnel and facilities to be able to estimate the existing disabilities and what degree of recovery could be anticipated from the proper type of treatment. The patient should then be referred back to his referring agency or physician along with the recommended treatment.

In another committee activity during the past year, an Oklahoma State Medical Association exhibit was prepared for the National Rehabilitation Association meeting, held in October, in Oklahoma City. The purpose of this thirty-foot display was to portray the physician's role in providing professional rehabilitation services. It was an outstanding, professionally-staffed display, and was well-attended by the two thousand persons who attended the national meeting.

COMMITTEE ON CIVIL DEFENSE

Report to the House of Delegates
May 7, 1961

General

The Civil Defense Committee falls under the Council on Public Health as authorized in the Oklahoma State Medical *Journal,*

June 1960, Volume 53, No. 6, Page 449. Members of the Committee are:

William H. Reiff, M.D., Chairman
Gifford H. Henry, M.D.
Tom Brett, Director of Civil Defense, State of Oklahoma
G. Henry Dericks, Commander, U.S.N.
Kirk T. Mosley, M.D., Commissioner of Health, State of Oklahoma
Don Blair, Associate Executive Secretary, OSMA

It is to be noted that the committee members represent the medical and surgical, public health, military, naval, civil defense, and administrative facets of the Disaster Mobilization Problem.

Committee Responsibility

Disaster Medical Care is the only facet of Civil Defense which is not directly under community, local, state or federal government control. This fact places a tremendous responsibility on the medical profession to prove that private enterprise is capable of responding to emergency situations as well as do governmental agencies, such as fire and police departments.

The State Medical Society and the State Health Department are mutually responsible for Disaster Medical Care and extremely close coordination between the two is required. The Medical Society is the operational agency for the actual CARE, but the State Health Department has been designated by the State Plan as being responsible for this activity, and in addition has the allied health personnel, public health, sanitation, and radiation survey problems. The AMA published a study on the medical care problem at the request of the OCDM. The OSMA is likewise cooperating with the State Health Department. The coordination is so close, that the OSMA-CD Chairman is on the staff of the commissioner and the commissioner is on our CD Committee. This would seem to be an ideal arrangement.

The responsibilities of this committee are as follows:

a. Planning, education and training, and otherwise preparing for Disaster Medical Care.

b. Coordination with allied health professions, hospital, sanitary, and public health personnel via the State Health Department.

Both responsibilities are being exploited.

Activities

1. *Committee Meetings.*

The committee has had two formal meetings, with nearly 100 per cent attendance, plus important guests. Agendas for the meetings have been published in advance, and mimeographed notes covering the proceedings have been made. Much correspondence and many individual contacts have furthered the work of the committee.

2. *National and Regional Meetings.*

The committee has been represented at the national meeting on Disaster Medical Care at the Palmer House in Chicago, November 4-6, 1960, at the regional meeting of the AMA Committee on Disaster Medical Care at the Roosevelt Hotel, New Orleans, February 19, 1961.

3. *Journal OSMA Disaster Medical Care Issue.*

The entire May issue of *The Journal*, OSMA is being devoted to Disaster Medical Care. The editorial, the president's page, the auxiliary page, the special and scientific articles, and the news will all be slanted toward explaining the threat we face; the national, state, and local plans; and some details on handling mass casualties. This should be a great issue.

4. *More Interest.*

There is much more interest in the subject as evidenced by:

a) Visitors at our meetings.

b) Contributions to our *Journal* issue by several physicians in the state.

c) Attendance at various conferences by several physicians from the OSMA.

d) Attendance at various MEND short courses, conferences, and/or meetings on the subject by approximately 100 state physicians.

e) Establishment of CD library and files at the OSMA Headquarters, duplicated at the Oklahoma State Department of Health.

f) Participation of committee members and other physicians in speaking to outside groups—PTA, military, school and hospital staffs.

g) Prepositioning of active CD emergency hospitals throughout the state.

5. *Liaison with Other OSMA Committees.*

a) The committee has encouraged the Legislative Committee to proceed with "Good Samaritan" type legislation.

b) The committee has met with the Postgraduate Education Committee concerning Disaster Medical Education, either as a separate postgraduate medical course or in the form of lectures at county medical societies and/or hospital staffs.

6. *Exhibit Planned for State Meeting.*

The committee has reserved space for an exhibit at the State Meeting and hopes to have a model of the 200-bed C.D.E.H. (Civil Defense Emergency Hospital).

7. *Civil Defense Coordinator Appointed for Oklahoma State Health Department.*

Although not a result of this committee's work, the appointment of Major Charles W. Dutreau, U.S. Army Retired, as Civil Defense Coordinator at the Oklahoma State Department of Health, was hailed by the committee as a real step forward.

The responsibility for maintaining current rosters of allied health personnel and hospital disaster plans, and *liaison* between physicians, hospitals, allied health personnel, and other facets of Civil Defense, has been shifted to Major Dutreau's office.

8. *MEND Program Active.*

Another program which was not the product of this committee, but which program is vital to the success of this committee's function, is the MEND program at the University of Oklahoma School of Medicine. Outstanding guest lecturers, instruction by the O.U. faculty, and visual education has been integrated into the regular curriculum at the school. There are no courses on "Civil Defense" or "Disaster Medical Care" per se, but these aspects are pointed out to the students as they pursue their medical and surgical subjects. MEND has sent many of the full-time and part-time faculty members to military-type short courses in Disaster Medical Care.

Recommendations and Future Projects

The Civil Defense Committee recommends that:

1. *Name.*

The name of this committee be changed to "DISASTER MEDICAL CARE" Committee, to conform with the AMA committees.

2. *Appointments.*

The chairman of the committee be appointed for a two-year period, or that the "chairman-elect" be known a year in advance, so that his personal education could be more fully developed.

3. *State Plan.*

The committee assist and advise the State Commissioner of Health on the re-writes of the Health Annex to the Oklahoma State Plan.

4. *Council on Allied Health Personnel.*

The OSMA officially recommend to the Governor and the Commissioner of Health that representatives of all the allied health disciplines be organized into a council as "special staff" for the Director of Disaster Medical Care.

5. *Stockpiling Supplies.*

That all physicians in the state be encouraged to "stockpile" the medical supplies which they constantly use in their practice. It seems there are no drug manufacturers in the state, and wholesale drug houses do not carry large inventories.

6. *Registration.*

That the OSMA urge the Governor or State Legislature to institute a state-wide registration of *ALL* (not limited to medical) citizens, particularly with regard to any propensities which might be utilized in disaster

medical care such as: a) previous military experience; b) experience in radiation sickness; c) experience in mass feeding; etc. The Civil Defense Committee's future projects include:

1. County society coordination — mutual assistance.
2. Identification cards and assignments.
3. Staffs for the fourteen prepositioned C.D.E.H.
4. Prepositioned supplies; emergency treatment-type station.
5. Medical supply problem.

LIAISON COMMITTEE TO THE DEPARTMENT OF HEALTH

Report to the House of Delegates May 7, 1961

Committee Members

Paul D. Erwin, M.D., *Chairman*
Charles E. Green, M.D. G. R. Russell, M.D.
Tom C. Sparks, M.D. Raymond G. Jacobs, M.D.
William Schottstaedt, M.D.

On the several occasions when this committee has met during the past year, it has made a sincere effort to counsel with representatives of the State Health Department and to form recommendations to its parent group, the Council on Public Health, along lines mutually acceptable to the profession and the department.

Significant among the actions taken this year are the following, which were transmitted to the Council on Public Health for final judgment:

1. It is recommended that routine determination of Rh factors on prenatal S.T.S. be discontinued by the Health Department, except on physician request in areas where the test cannot be run, or for other special reasons as determined by the attending physician.

2. The committee recognizes the concern of the Health Department over distribution and administration problems which may be faced with the advent of live polio vaccine. It recommends that special measures be taken soon by the Council on Public Health to minimize future problems.

3. The committee recommends legislative action to permit health departments to receive funds for bedside nursing care services from agencies or individuals. By doing so, the availability and quality of such care may be increased throughout the state, particularly in rural areas.

4. The penicillin prophylaxis program of the Health Department, to provide penicillin for rheumatic fever and rheumatic heart disease cases, is recommended for approval. Under this program, jointly sponsored by the Health Department and the Oklahoma State Heart Association, bicillin and buffered potassium penicillin G are supplied through private physicians and/or county health units to state residents not already covered by the Crippled Children's program.

The penicillin is issued on prescription from the physician; and is available through the county health department.

This program is designed to demonstrate the value of this type of applied preventive medicine. At the same time, no patient is denied the benefits of continuous prophylaxis because of financial inability to obtain the penicillin.

5. Regarding House Joint Resolution 511, a resolution recognizing the Oklahoma Nursing Home Association as an evaluation agency to classify homes for welfare payment purposes, the committee supports the commendatory nature of the resolution, but believes the evaluation of nursing homes should properly remain the function of some existing state department. It is therefore recommended that the resolution should only commend the program as one of accreditation.

6. Recognizing that the Governor's Budget A would decrease the State Health Department's budget by $24,225 annually, the committee recommends, as a minimum, endorsement of Budget B, which would increase the appropriation by $38,000. The department has asked for a $380,000 increase to provide the necessary wherewithal to conduct an effective public health program.

News

The AMA's "World's Fair" of Medicine—New York!

The American Medical Association's 110th annual meeting, the "world's fair of medicine," will bring an estimated 50,000 persons, including 25,000 physicians, into New York City, June 25-30.

The five-day convention, biggest of its kind in the world, will have as its theme: "Teamwork in Medicine."

The 1961 meeting will mark the eighth time that the A.M.A. has met in New York. The last convention there was in 1957 when 23,888 physicians registered.

Technical exhibits, numbering 827, and more than 350 scientific exhibits largely developed, designed, and manned by physicians reporting their research, will take up practically every inch of New York's big Coliseum.

The AMA meeting will open formally on Sunday, June 25, with a special preview luncheon and showing in the Coliseum for AMA officers and committee chairmen, members of the Board of Trustees, representatives of the Pharmaceutical Manufacturers' Association, and invited guests. Registration hours, Monday through Thursday, will be from 8:30 a.m. to 5:30 p.m., and until 12 noon on Friday, the final day.

Doctor Leonard W. Larson, 63-year-old pathologist and clinic executive from Bismarck, North Dakota, will be inaugurated as president of the AMA at 8:30 p.m., Tuesday, in the Waldorf-Astoria ballroom. Doctor Larson, who will give his inaugural address at that time, succeeds Doctor E. Vincent Askey, Los Angeles surgeon. A reception and ball will be held afterwards.

Scientific Sessions

More than 2,000 physicians will take part in the AMA scientific program, which is designed to keep doctors abreast of what's new in medicine.

Teaching mediums will include lectures,



America's front door—New York City—will present this glistening and glamorous facade of welcome to the nation's physicians, their families and their guests when the American Medical Association holds its 110th Annual Meeting there. Advance registration and hotel reservation forms appear in JAMA (March 4, 18, April 1, 29, and May 13) and in April issues of all AMA specialty journals.

symposiums, panel discussions, movies, and closed-circuit television.

More than 300 physicians will deliver lectures before 20 different section meetings. Each section represents a specialty in medicine. The section meetings, which run simultaneously, will be held not only in the Coliseum, but also in hotels nearby: the Essex House, Barbizon Plaza, the Plaza, Henry Hudson, and the Sheraton-Park.

A highlight of the scientific program will be a one-day meeting on Monday, sponsored jointly by the AMA and the American College of Chest Physicians. This program will consist of symposiums, panel discussions, reading of scientific papers, roundtable luncheon meetings, and "fireside conferences," where physicians gather to discuss medical problems of the chest informally.

On Tuesday, the AMA will sponsor for the first time a Research Forum. Participants will represent a cross-section of every medical specialty. The Forum program, representing six different sessions with more than 200 participants, also will be held on Wednesday and Thursday.

The AMA Section on Otolaryngology will sponsor instruction courses on surgery of the ear, the nose and sinuses, and the throat for the visiting doctors. The program will be repeated three times on Thursday with attendance at each session limited to 50.

High blood presure due to kidney diseases will be the topic of a combined meeting of five AMA sections: general practice, urology, general surgery, internal medicine, and pathology and physiology. This program will be held in the Coliseum on Wednesday morning, and a similar program dealing with diseases of the colon will be held in the afternoon. This meeting, which is also sponsored by five sections—preventive medicine, gastroenterology and proctology, radiology, pathology and physiology, and surgery—will close with a panel discussion by all participants.

The AMA Section on Surgery and the Section on Physical Medicine will hold a combined meeting with the American Rheumatism Association in the Coliseum on Thursday with an entirely new program format. The program, dealing with rheumatoid arthritis, will include a symposium, a lecture, a motion picture film, and "live" color television, sponsored by Smith, Kline & French Laboratories, Philadelphia. On the same day, the Section on Surgery will sponsor a television program showing the various new chemical treatments for cancer of the bowel.

Visiting physicians will be able to view and study the largest and most unusual collection of fresh tissues ever assembled at a medical meeting. All New York hospitals will contribute to this educational exhibit.

Medical Motion Pictures

Motion pictures, a vital and important medium in the education of physicians, will play a big scientific role at the AMA meeting.

Ralph Creer, director of medical television and motion pictures of the AMA, said more than 50 films will be shown throughout the week. They will cover the newest developments in many branches of medicine. The U.S. International Medical Exhibit, a worldwide collection of outstanding medical films, will be featured.

House of Delegates

The House of Delegates, the policy-making body of the AMA, will meet at the Statler-Hilton, the headquarters hotel, at 10 o'clock on Monday morning.

The House, patterned very much like the Congress of the United States, consists of 190 physicians from constituent or state medical societies, plus one delegate from each of the five government services, including the Army and Navy, and one delegate from each of the 20 scientific sections, a total of 215 members.

Announcing . . .

UTERINE CANCER PROGRAM

Beginning April 21, 1961

The U.S. death rate for uterine cancer has been cut more than 40 per cent in 25 years among white women, 25 per cent among Negro women. Until recently, the decline was attributable to the unremitting education of women which the American Cancer Society began in 1936, and improved treatment.

Four years ago, a powerful new tool was added: "The Uterine Cytology Program." This program of the American Cancer Society has been vastly effective. Many women have been introduced to the valuable cell examination for uterine cancer, often called the "Pap Smear," after it's pioneer developer, George N. Papanicolaou, M.D.

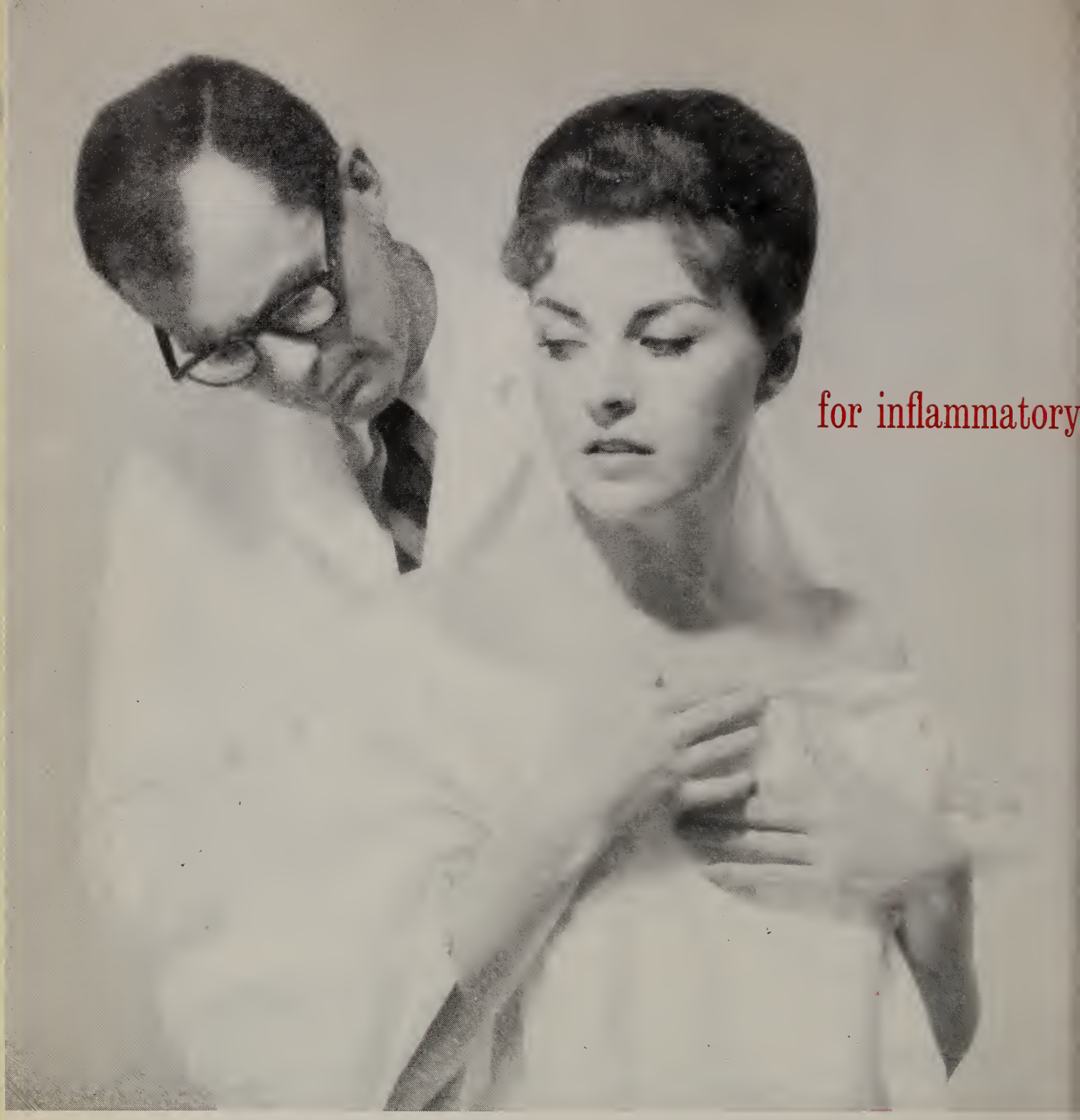
A project which will introduce many additional women to this information will be launched in Oklahoma on April 21, as the Oklahoma Federation of Women's Clubs, joining the General Federation and the American Cancer Society begins an intensive campaign to influence each of its 8,123 members in 350 clubs to have an annual health examination including a "Pap Smear." Each member will be urged to give herself a birthday present of a checkup on her birthday. Much interest will be aroused by the publicity of this project and many women who are not included in Oklahoma's Federation membership will also seek this examination.

We take this means of alerting the Oklahoma physicians of the project—and of our certainty that many women—perhaps double last year's number—will be requesting the cell examination for uterine cancer. The ACS, Oklahoma Division is cooperating fully, and a wealth of valuable information is available to County Societies and individual physicians from the American Cancer Society.

Material for a cervical smear can be obtained either by aspiration or by use of a cotton-tipped applicator or a wooden spatula. Material should immediately be spread upon the surface of a clean glass slide. In order to secure good fixation the slide is promptly and completely immersed in a solution of equal parts of 95 per cent alcohol and ether. A fixation of an hour or longer permits a more thorough penetration of the cells and increases the adhesion of the smear film to the slide. Slides should be placed in the plastic mailing container, provided by pathology laboratories with a few drops of the fixing solution.

The state of Oklahoma is fortunate in having the services of several good pathologists and the Oklahoma Pathology Association is cooperating in this project. It is hoped that this program will bring us nearer the possible cervical cancer cure rate of nearly 100 per cent.

Joe M. Parker, M.D., Chairman
Cancer Committee Oklahoma State Medical Association



for inflammatory

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A recent study has demonstrated the efficacy of triamcinolone acetonide 0.1 per cent in 222 patients with a variety of allergic and inflammatory dermatoses. The conditions included in the study were contact dermatitis, seborrheic dermatitis, neurodermatitis, atopic dermatitis, and pruritus vulvae.

The anti-inflammatory and antipruritic efficacy of triamcinolone acetonide was shown by the prompt control of itching and resolution of affected areas. Cahn, M. M., and Levy, E. J.: A Comparison of Topical Corticosteroids: Triamcinolone Acetonide, Prednisolone, Fluoromethalone, and Hydrocortisone.

Antibiotic Med. & Clin. Ther. 6:734 [Dec.] 1959.

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Kerr Supports AMA Position

Oklahoma's Senator Robert S. Kerr pledged all out support of the American Medical Association's opposition to HR 4222, the Anderson-King bill, during his luncheon address at an AMA Medical Legislative Conference in Chicago on March 18th.

The conference was attended by 350 representatives from the nation's fifty state medical societies. Of principal concern was the Kennedy Administration-sponsored bill which will provide hospital, nursing home and certain out-patient care to the elderly, through expansion of the Social Security system.

The Oklahoma Democrat is opposing the Social Security approach on the grounds that it does not help those who need it most and that the financing of such a program should be spread across the entire tax base, rather than limited to Social Security contributions. He is promoting the implementation of his own Kerr-Mills Bill in which the Federal government matches state funds for locally-designed and controlled health programs for the indigent elderly.

Warned Against Apathy

Kerr, in his well-received talk, said, "Your cause is right. But there have been many a righteous call that floundered because the righteous were asleep. The night you and your friends go to sleep is the night it will happen to you. You can't lose this battle but once."

In developing his point, he advised the audience to concentrate their attention on the House Ways and Means Committee, site of the first legislative battle. He predicted that this key committee can hold the line this year and maybe next.

Kerr complimented the Oklahoma State Medical Association for its assistance in the development of the Kerr-Mills Bill as a positive alternative to the Social Security approach.

Medical representatives were reportedly highly impressed with the candor and philosophy of Kerr's speech. During his stay in Chicago, he spent considerable time with representatives of the Oklahoma State Medical Association. A reception in his honor was sponsored by the Oklahoma group just prior to his appearance as the luncheon speaker. AMA officials and representatives of other state societies eagerly accepted the opportunity to personally visit with the Senator.

Eight Sooners Attend

Oklahoma was well-represented at the important conference by the following individuals: Walter E. Brown, M.D., OSMA President; John F. Burton, M.D., Member of the AMA Council on Medical Service; Clinton Gallaher, M.D., President-Elect; R. Q. Goodwin, M.D., OSMA Council on Public Policy; Worth Gross, M.D., OSMA Federal Legislative Committee; John E. McDonald, M.D., AMA Council on Legislative Activities; J. R. Stacy, M.D., OSMA Council on Public Policy; and Dick Graham, OSMA Executive Secretary.

Brown Presides

Doctor Brown was selected by the American Medical Association to preside at the luncheon meeting. He also introduced Senator Kerr to the group.

In addition to Brown and Kerr at the head table were AMA President E. Vincent Askey, M.D., Joseph Stetler, LL.B., Director of the AMA Legislative Activities Division, and Bill Reynolds, Kerr's assistant and native Oklahoman.

Kerr Grounded

Senator Kerr left Chicago shortly after his presentation, but, due to weather conditions, had to cancel his air travel plans and proceed to Washington, D.C. by train.

Tulsa GP's Plan Hospital

Fifteen Tulsa general practitioners have announced plans to construct a 200 bed hospital. Incorporated as the Doctors' Medical Center, the non-profit organization has named as officers: John D. Capehart, M.D., President; Harlan Thomas, M.D., Vice-President; and Marshall O. Hart, M.D., Secretary-Treasurer.



Dedication audience hears Doctor Mark R. Everett, director and dean, introduce the speaker, U. S. Senator Mike Monroney, far right, at rites marking completion of the University of Oklahoma Medical Center's new research building (left background). Others on the front row of the speakers' platform are Doctor Jack Wilkes, president of Oklahoma City University, Doctor Don H. O'Donoghue, Faculty Board Chairman, Victor Wickersham, sixth district congressman, Lieut. Gov. George Nigh.

Research Building Dedicated at Medical Center

A new five-story research building at the University of Oklahoma Medical Center was dedicated March 11 in ceremonies featuring an address by U. S. Senator Mike Monroney.

Faculty members started occupying laboratories in the newly-completed structure later in the month. It will be used solely for research, primarily of a basic nature.

Terming the construction a partnership operation of federal and state governments, Senator Monroney declared no investment of tax monies "is so capable of eternal dividends" as an investment in medical research. He said the interest would be compounded through the remaining space of time.

In answer to his own question, "Is it worth it?", Monroney contrasted the $715 million total yearly national cost of research support with a $35 billion annual cost of disease.

He cited numerous examples of research breakthroughs which have brought savings in human lives and productivity.

In closing, Monroney pointed to medical research as one of the avenues to world peace. "The peoples coming out from colonialism are going to be far more interested in the use of science for life than for death," he asserted.

Doctor Don H. O'Donoghue, chairman of the Faculty Board of the University of Oklahoma School of Medicine, presided over the ceremonies, held on the grounds west of the new building. Doctor Mark R. Everett, director and dean, introduced the guest speaker, and Doctor Jack Wilkes, president of Oklahoma City University, gave the invocation and benediction.

The $864,193 building project was financed by a Federal Research Facilities construction grant matched by an appropriation from the 1959 legislature.

Facilities include 36 laboratory modules, averaging 12 by 20 feet, a conference room-library, radioisotope laboratory, animal quarters, photography studio and darkroom, constant temperature rooms, sterile process rooms, machine shop.

Space has been allocated for research in the fields of internal medicine, cardiology, neurology, gastric physiology, pediatrics, biochemistry, dermatology, obstetrics-gynecology, pharmacology, microbiology and physiology.

Regional Postgraduate Meeting Slated for Muskogee

As a finale to this year's activities of the Postgraduate Education Committee, a regional course will be held on April 18th in Muskogee. The program, which will take place in the Conference Room of the Muskogee General Hospital, will be the last of a series of decentralized meetings conducted this year.

"The Kidney"

The afternoon and evening program will feature basic science, diagnostic and therapeutic considerations of the kidney. Beginning at 4:30 p.m., the format provides for two hours of instruction, followed by dinner and two additional hours of instruction and discussion.

Conducting the course will be Doctors John P. Colmore, Robert Lindeman and W. O. Smith, all from the University of Oklahoma School of Medicine.

Physicians from within a 100 mile radius of Muskogee have been invited to attend, but all others are welcome according to R. R. Hannas, M.D., Chairman of the OSMA Committee and Gilbert W. Tracy, M.D., Muskogee committee member who is in charge of local arrangements.

The fee for the course, which includes dinner and tuition is $7.50. Those who attend are eligible for four hours Category I credit from the American Academy of General Practice.

OASI Fund Shaky

The OASI Trust Fund continues to squeak at the seams.

In 1959, the Social Security program operated at a deficit of $1.7 billion, which reduced the trust to $20.1 billion. Through a tax hike in 1960, a $184 million surplus for the year was realized, and planners are guessing they will have an $18 million surplus this year.

But lookout! The effect of the 1960 tax increase will wear off by 1962, resulting in a deficit of $407 million and a further reduction in the trust fund.

Continued tax boosts will be necessary to keep the fund solvent, since it is now over $2 billion less than in 1956.

New Radio Health Series Portrays Role of Doctor

A new radio drama-interview series called "Highroad to Health" is now being made available to radio stations throughout the country by Lederle Laboratories Division, American Cyanamid Company. The 13-week public service series, with no commercials or product plugs, consists of a 10-minute drama portraying the role of the physician in handling a particular medical problem, followed by a five-minute interview with a guest physician, selected for his special knowledge of the subject discussed in the drama.

In offering the series to radio stations, Lederle is suggesting that stations contact their local state and county medical societies, if interested in substituting live interviews with local physicians for the recorded five-minute interview. Lederle will inform state and county societies by letter when their local station has scheduled the "Highroad to Health" series in order to facilitate the opportunity for cooperation between the station and the society. However, if your society is not contacted within the next month and is interested in participating in this broadcast series, it may contact Lederle Laboratories or AMA's Media Relations Department, Radio, Television and Motion Pictures Section (Richard Reinauer, director) for further information.

Medical subjects to be featured in the series include mental health, hypertension, arthritis, the problems of aging, cancer, tetanus, nutrition, appendicitis.

The American Medical Association's Media Relations Department has reported that many Oklahoma radio stations are cooperating in the project.



Learning to take blood pressures.

Army Reserve Unit Needs Physicians

The 44th Evacuation Hospital of the U.S. Army Reserve has several vacancies for physicians in its organizational structure, it was recently announced by Hospital Commander Hervey A. Foerster, Colonel, MC, USAR.

The 44th usually meets Wednesday evenings from 7:30 to 9:30 at Krowse Army Reserve Training Center, N.E. 36th and Lincoln, Oklahoma City. During training assemblies, some of the personnel go to the Veterans Administration, Tinker AFB, and University Hospitals to conduct on-the-job training for ward and operating room personnel.

Physicians who join the unit may expect to be paid for 48 assemblies per year, plus 15 days of active duty training during summer months. The 48 pay periods are achieved by attending only 42 meetings, since six Sunday meetings count double for pay and retirement credit purposes.

Below are selected annual pay scales, based upon full weekly attendance and summer camp.

Grade	Years Svc.	63 Days
Major	6	$976.50
Captain	4	871.50
Lieutenant	2	544.66

Physicians may count medical school, internship and professional practice years in computing pay scale. Thus, a newly commissioned doctor, without previous military service, will begin with a minimum of five years credit.

Interested physicans or ancillary personnel should contact the Unit Advisor at GArfield 7-2411, or Doctor Foerster at CEntral 5-2944, Oklahoma City.

Cerebral Palsy Subject of Symposium

A one-day Symposium on Cerebral Palsy is planned by the Texas Medical Association for April 22 in Galveston. The meeting, to be held in the Ballroom of the Buccaneer Hotel, will be co-sponsored by the Texas and national United CP organizations, as well as various professional associations of Texas.

Highlighting the scientific program will be the appearances of Meyer A. Perlstein, M.D., Professor of Pediatrics, Cook County Postgraduate School, Chicago, and William F. Caveness, M.D., Professor of Clinical Neurology, Columbia College of P and S, New York.

Doctor Perlstein will address the group on the topic "Practical Aspects of Cerebral Palsy and its Management," and will conduct case presentations on "Rh Athetoid, Hemiplegia and Paraplegia."

Doctor Caveness will appear at the luncheon, with his subject "The Research Picture in Cerebral Palsy."

Other speakers will conduct a panel discussion on "Modalities of Management and Treatment," covering the aspects of dentistry, physical therapy, occupational therapy, special education, speech and hearing, and psychology.

During the afternoon, C. W. N. Eggers, M.D., Galveston, President of the American Academy of Cerebral Palsy, will address the groups on "The Challenge Ahead."

All interested Oklahoma physicians have been invited to attend the meeting.

Employment of the Handicapped Essayists Receive Awards

Ten highschool juniors and seniors received essay contest awards on March 29th when Governor J. Howard Edmondson and others gathered in the Capitol's Blue Room to honor student winners in the Governor's Employ the Handicapped Essay Contest.

Receiving first prize was Miss Sharon Davis, student from Oklahoma City's Northwest Classen Highschool. For her award-winning essay, she received a $200 U.S. Savings Bond from the Oklahoma Association of Insurance Agents, a $200 savings account from Associated Industries, an expense paid trip to Washington, D.C., from the AFL-CIO and a college scholarship.

To reward her teacher, Miss Doris Taylor, for her assistance in promoting the contest, the Oklahoma State Medical Association is paying her way to the nation's capitol, where state winners will be on hand for the national judging this month.

Other winners in the state contest received awards from various state organizations during the afternoon ceremonies, and all of them were awarded scholarships through a cooperative program of the public and private colleges and universities of the state.



Mark R. Johnson, M.D., OSMA Secretary-Treasurer, is shown presenting a travel expense check to Doris Taylor, teacher of the first place essayist, as Doctor Waldo Stephens looks on.



E. M. Burk, President of the Oklahoma Association of Insurance Agents, is shown with Miss Sharon Davis, contest winner.

Wide Acceptance

The contest, sponsored by the Governor's Committee on Employment of the Handicapped, has gained wide acceptance throughout the state in recent years. This year, over 4,000 students entered, as compared to only 20 entries in 1956.

Designed to educate youngsters on the problems of the handicapped and generally increase public awareness, the contest is but one part of the program of the Governor's Committee. The committee, activated by former Governor Gary in 1956, is actually a citizens group, whose goal is to conduct a year-round information program on rehabilitation and employment of the handicapped. Interwoven into all projects of the committee is the philosophy of returning the handicapped to productivity and independence.

The OSMA is the only medical organization in the nation to regularly contribute to the essay contest.

BLUE CROSS UTILIZATION PERCENTAGES*

Year, 1959 Compared to Year—1960

County	1959	1960	% Change	County	1959	1960	% Change
Adair	86.4%	112.0%	+25.6	Lincoln	117.9%	99.7%	–18.2
Alfalfa	111.1	111.5	+ 0.4	Logan	64.3	83.3	+19.0
Atoka	110.9	123.1	+12.2	Love	80.1	87.4	+ 7.3
Beaver	84.7	97.5	+12.8	McClain	97.6	76.2	–21.4
Beckham	95.8	87.5	– 8.3	McCurtain	123.2	114.1	– 9.1
Blaine	114.6	120.9	+ 6.3	McIntosh	92.3	111.8	+19.5
Bryan	84.4	106.3	+21.9	Major	101.4	120.4	+19.0
Caddo	93.3	89.3	– 4.0	Marshall	81.3	107.3	+26.0
Canadian	90.6	85.2	– 5.4	Mayes	85.4	105.0	+19.6
Carter	83.3	88.8	+ 5.5	Murray	96.1	104.0	+ 7.9
Cherokee	92.5	97.6	+ 5.1	Muskogee	90.2	108.2	+18.0
Choctaw	121.3	112.8	– 8.5	Noble	109.3	116.5	+ 7.2
Cimarron	153.3	124.1	–29.2	Nowata	124.3	108.1	–16.2
Cleveland	91.1	108.7	+17.6	Okfuskee	86.2	129.6	+43.4
Coal	106.1	104.5	– 1.6	Oklahoma	80.9	92.7	+11.8
Comanche	94.5	108.6	+14.1	Okmulgee	125.0	104.9	–20.1
Cotton	90.5	74.8	–15.7	Osage	121.2	104.4	–16.8
Craig	100.5	100.3	– 0.2	Ottawa	96.3	95.0	– 1.3
Creek	136.3	124.8	–11.5	Pawnee	117.9	119.0	+ 1.1
Custer	79.7	102.9	+23.2	Payne	92.0	97.6	+ 5.6
Delaware	106.0	94.4	–11.6	Pittsburg	102.7	104.5	+ 1.8
Dewey	87.9	108.1	+20.2	Pontotoc	115.2	98.9	–16.3
Ellis	84.8	86.6	+ 1.8	Pottawatomie	87.4	95.5	+ 8.1
Garfield	129.1	129.4	+ 0.3	Pushmataha	116.4	143.3	+26.9
Garvin	85.2	79.9	– 5.3	Roger Mills	110.1	91.0	–19.1
Grady	72.4	88.5	+16.1	Rogers	99.8	114.1	+14.3
Grant	144.1	132.4	–11.7	Seminole	77.3	93.7	+16.4
Greer	72.3	89.6	+17.3	Sequoyah	125.9	102.8	–23.1
Harmon	90.2	100.7	+10.5	Stephens	101.4	106.1	+ 4.7
Harper	87.2	78.5	– 8.7	Texas	108.4	122.3	+13.9
Haskell	105.3	95.0	–10.3	Tillman	103.4	77.9	–25.5
Hughes	96.2	89.6	– 6.6	Tulsa	111.5	105.0	– 6.5
Jackson	86.6	108.5	+21.9	Wagoner	85.2	90.9	+ 5.7
Jefferson	151.6	121.7	–29.9	Washington	107.9	109.4	+ 1.5
Johnston	72.3	82.0	+ 9.7	Washita	79.9	111.1	+31.2
Kay	94.2	103.2	+ 9.0	Woods	104.9	110.1	+ 5.2
Kingfisher	78.1	86.9	+ 8.8	Woodward	100.6	114.2	+13.6
Kiowa	89.2	69.4	–19.8				
Latimer	103.3	95.5	– 7.8				
LeFlore	89.7	97.9	+ 8.2	Average	99.9	102.4	+ 2.5

*Utilization is on a paid basis and does not include reserves and operating expenses.

Released by the Committee on Prepaid Medical Care for the Information and Education of OSMA Members.

Book Reviews

Rudolph Matas: A Biography of One of the Great Pioneers in Surgery, Isidore Cohn, M.D., Hermann B. Deutsch, Doubleday & Co., 1960, New York, pp. 416. Price $5.95.

This is an inspiring and moving biography of a man who was the personification of greatness in its truest meaning.

It is one of the most revealing and most complete sketches of a personality ever to be published. Doctor Cohn, as a student, as an associate, and as a close personal friend of the man, was in a position to know him intimately. Hermann B. Deutsch is a successful author and newspaperman.

Through his well kept diaries and his meticulous records, Rudolph Matas made valuable contributions to his own biography. These were carefully preserved and finally were made available to Doctor Cohn.

No person who knew Matas in his professional field, as a teacher, as a surgeon, and as a writer could possibly overlook the fact that here was a man who was outstanding. The elements of greatness were so plainly evident in his speech, his manner, and his bearing that they forced recognition from even the illiterate patients who passed through his clinics. But on seeing such a person people sometimes wonder if this appearance of gentility is something that can be put on for special occasions or if it pervades the entire makeup of the individual.

That Doctor Matas was always the same and never lost his poise even in his triumphs and disappointments, in his loves and losses, during his joyful occasions and in his tragic sorrows is brought out by this biography.

The only son of a Spanish doctor, he was born September 12, 1860, in a small town some fifty miles downstream from New Orleans. His early life was closely entwined with a fascinating social history of New Orleans during the last half of the nineteenth century. There are interesting accounts of the various outbreaks of yellow fever and Rudolph Matas himself was stricken with the dread "Bronze John" at the age of seven. He managed to survive both the disease and the heroic treatment administered by his frantic father. A blood test seventy-seven years later showed that he was still immune to the disease.

Interestingly enough, the authors have woven into the story of the life of Matas a close up study of a famous and mysterious literary genius by the name of Lafcadio Hearn. In many ways the two men differed from each other to the point of incongruity, but they became inseparable companions over a period of time.

Most of the many worth-while achievements of Matas took place during the 32 years that he was professor of surgery at Tulane University. He was a pioneer in many things and was the recipient of many national and international honors. He is better known for his work in vascular surgery, particularly for his operations on aneurysms. He did his first successful endoaneurysmorrhaphy on a patient in Charity Hospital in 1888. During the next sixty years he performed hundreds of operations on blood vessels, many of them on aneurysms of large vessels.

There were numerous tragic episodes in the personal life and in the domestic relations of the man and these are all brought out in the book. Perhaps the greatest threat to his career occurred in 1908 when, during an operation on a tubo-ovarian abscess, he had the misfortune to acquire a gonorrheal infection of one eye. He eventually lost the eye but despite a marked astigmatism and myopia in the other eye, he was able to continue to do minute and exacting surgery.

A slight tendency towards wordiness may cause this book to be something less than a literary masterpiece, but it deserves a place on the reading list of every physician. We are all indebted to these authors for assembling and recording so well the life story of one who made a terrific impact upon the medical world.—*Carroll M. Pounders, M.D.*

Healthful School Living, Charles C. Wilson, M.D., Editor, National Education Association, Washington, D.C., 1957, pp. 323. Price $5.00.

This well written, easily read book presents the report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. Though of limited interest to the average physician, it is recommended for school nurses, school physicians, and other physicians interested in school health problems. This book covers a wide array of problems varying from construction of schools to health considerations of school lunches. The advice to both physicians as well as parents about the hygiene of respiratory infections is noteworthy. One of the most important messages concerns the need for parents to keep children at home when they are ill to prevent exposure of others to illness.

The chapter, "A Concept of Healthful School Living," is recommended highly to all concerned with any type of school work. —*Jimmy L. Simon, M.D.*

Heart Page

(Continued from Page 158)

emphasized a presystolic accentuation of the diastolic murmur, and in some cases mitral stenosis has been mistakenly diagnosed. At times the diastolic murmur is high-pitched, gushing and soft, resembling the murmur of aortic insufficiency.

Three possible mechanisms for the murmurs exist: (1) mitral regurgitation, (2) flow of blood into and out of the aneurysm, and (3) pericardial friction. Scherf and Brooks think that the systolic murmur is produced by the expulsion of blood from the main ventricular cavity into the aneurysm and the diastolic murmur by the aneurysm bleeding into the ventricle. This does not explain the accentuation of the murmur toward the end of diastole. One might postulate that auricular contraction ejects blood with still greater force into the aneurysm and causes increased turbulence. It must be assumed, however, that the amount of residual blood in the left ventricle is greater than usual and that the aneurysmal sac is not empty at the beginning of diastole. If one assumes that blood is forced into the aneurysmal sac during systole to cause the systolic pulsation and systolic murmur and that the diastolic backflow of blood into the left ventricular cavity causes the diastolic murmur, it is difficult to understand why the murmur should be louder at the end of diastole.

Changes occurring with cardiac rupture have been described in a patient in whom a rupture occurred during auscultation. Massey and Drake stated no friction rub was heard before the episode, but immediately after, an intense, grating pericardial rub was audible from the third left interspace down to the apex.

Final diagnosis of ventricular aneurysm ultimately rests upon roentgenographic, fluorscopic and electrocardiographic findings, yet with the prevalence of coronary heart disease today, ventricular aneurysm should attract more attention than in the past, and more attention should be placed upon any sign or clinical feature likely to facilitate its recognition.

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NOTICES

Proceedings of a National Conference on Cardiac Work Evaluation Units, sponsored by the American Heart Association, are available at 75c a copy from the Oklahoma State Heart Association, 835 N.E. 13, Oklahoma City, Oklahoma.

The 1961 Annual Meeting and Scientific Sessions of The American Heart Association will be held in Bal Harbour, Miami Beach, Florida, October 20-24, in the Americana Hotel. May 15th has been set as the deadline for submitting abstracts of papers to be presented at the Scientific Sessions. Papers intended for presentation must be based on original investigations in, or related to, the cardiovascular field. Official forms for submitting abstracts may be obtained from Richard E. Hurley, M.D., 44 East 23rd Street, New York 10, New York.

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WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

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WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

HOUSE PHYSICIANS NEEDED immediately for Tulsa's new St. Francis Hospital. Contact Key B, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma, for further information.

WANTED: Old and antique medical books in pediatrics and neurology. Contact Lucius Waites, M.D., Department of Pediatrics and Neurology, University of Oklahoma Medical Center, Oklahoma City.

PHYSICIAN WANTED: Laverne, Oklahoma, population 2,000, plans to build a new hospital in the near future. No practicing M.D.s in town at present. Contact Wayne Carlisle, Carlisle Drug, Laverne.

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These positions are strictly 40-hours per week, with no "night calls." Doctors may continue private practice, during off-duty hours, as long as it does not interfere with their attendance and performance of duties at the Base. They may not accept or continue employment resulting in payment from the City, County, State, or other Federal agencies, due to dual compensation laws. Salary is increased by $260 per annum each eighteen months to a maximum of $11,935 per annum.

Qualification requirements for these positions and information about fringe benefits, such as retirement, may be obtained at any first or second class post office or through the Employment Branch, Tinker AFB, PE 2-7321, Extension 2691.



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PHYSICIAN PLACEMENT

Anesthesiology

Richard S. Dillman, M.D., 529 Fifth Street, Ann Arbor, Michigan; age 35; married; University of Michigan, 1956; board eligible.

Leonard W. Rozin, M.D., 2740 N.W. 21st St., Oklahoma City; age 33; married; University of Kansas, 1959; now completing general practice residency at University Hospital; desires association in Oklahoma City; available July 1, 1961.

General Practice

Frank Augustus Bautz, M.D., 265 Concord Road, Sudbury, Massachusetts; age 46; married; Harvard Medical School, 1942; board eligible; eligible Summer 1961.

Conrad Markert, M.D., Hillcrest Medical Center, Tulsa; age 31; married; University of Oklahoma, 1960; available July 1, 1961.

Irving Teague Staley, M.D., 4207 Givens Avenue, Memphis 17, Tennessee; age 32; married; University of Tennessee, 1960; available July 1, 1961.

Joe Allen Stewart, M.D., Box 337, Fountain Inn, South Carolina; age 36; married; University of Oklahoma, 1949; available immediately.

Floyd E. Webb, Jr., M.D., 2527 Webster Drive, Alexandria, Louisiana; age 27; married; University of Oklahoma, 1957; available August, 1961.

E.E.N.T.

August L. Stemmer, M.D., 20th Station Hospital, APO 696, New York, N.Y.; age 32; married; Harvard Medical School, 1953; board certified; Available May 1, 1961.

Industrial

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available immediately.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

James Stanford Haimsohn, M.D., 3340 Poplar Avenue, Memphis, Tennessee; age 43; married; University of Tennessee, 1942; board certified; available 90 days.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

George F. Winks, Jr.. 217 S. Boulevard, Apt. 1, Richmond, Virginia; age 28; married; Medical College of Virginia, 1957; board eligible; available July 1, 1961.

Obstetrics and Gynecology

Philip Tabor Bennett, M.D., Quarters 739A, Maxwell A.F.B., Montgomery, Alabama; age 31; married; University of Texas Medical School, 1954; board eligible; available July 1961.

Walter G. Crowe, M.D., Mercy Hospital, Pride 4, Locust St., Pittsburgh, Pennsylvania; age 39; married; University of Tennessee College of Medicine, 1955; board eligible; available March 10, 1961.

Richard W. Fenaughty, M.D., 95 Hart Street, New Britain, Connecticut; age 31; married; State University of New York, 1957; available July 1961.

Milburn W. Hobson, M.D., 2011 West 39th, Kansas City, Kansas; age 30; married; Kansas University, 1955; available July 1, 1961.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

Orthopedics

Sheldon Roger, M.D., 1185 Holly Street, Denver, Colorado; age 31; married; Indiana University, 1953; board eligible; available July 1, 1961.

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Psychiatry

William L. Sherman, Jr., M.D., 201 East Kirby, Detroit 2, Michigan; age 38; single; Wayne State University College of Medicine, 1947; board eligible; available immediately.

Mary Eichhorn, M.D., 501 Fourth Street, Garden City, Kansas; age 38; single; University of Kansas, 1945; board certified; available immediately.

Preventive Medicine

Robert E. Jewett, M.D., 2820 Fairway Drive, Birmingham, Alabama; age 52; widower; Indiana University, 1934; board certified; desires administrative practice; available immediately.

Radiology

Quentin T. Brooks, M.D., 6922 Edgemoor Drive, Houston, Texas; age 40; married; Oklahoma University School of Medicine, 1953; board certified; available immediately.

Fred T. Hargrove, M.D., 217 North Pinewood Drive, Carthage, Texas; age 56; married; University of Oklahoma School of Medicine, 1934; board certified; available January 1, 1961.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty. broncho-esophagology and thoracic surgery; available immediately.



How you can help save your patients a month's pay

Kestler reports in J.A.M.A. (April 30, 1960) that conventionally treated low-back syndrome patients required an average of 41 days for full recovery (range: 3 to 90 days). The addition of Soma therapy in this comparative investigation reduced the average to 11.5 days (range: 2 to 21 days). With Soma, patients averaged full recovery 30 days sooner.

Coming Meetings

STATE

Apr. 18—"The Kidney," Regional Postgraduate Course, Oklahoma State Medical Association. Muskogee General Hospital, Muskogee, Oklahoma.

May 7-9—Oklahoma State Medical Association, Mayo Hotel, Tulsa, Oklahoma.

May 10—"Infectious Diseases in Infancy and Childhood." Postgraduate course, auditorium, University of Oklahoma Medical Center.

Oct. 23-25—Oklahoma City Clinical. Biltmore Hotel, Oklahoma City.

REGIONAL

Apr. 16-19—Arkansas Medical Society. Hotel Marion and Robinson Auditorium, Little Rock, Arkansas.

Apr. 19-21—Second Annual Contact Lens Course. University of Texas Postgraduate School of Medicine, Houston, Texas.

Apr. 22-25—Texas Medical Association, Galvez and Buccaneer Hotels, Galveston, Texas.

May 1-3—Kansas Medical Society. Broadview Hotel, Wichita, Kansas.

May 8-10—Louisiana State Medical Society. Hotel Roosevelt, New Orleans, Louisiana.

NATIONAL

Apr. 10-12—American Academy of Pediatrics. Sheraton-Park Hotel, Washington, D.C.

Apr. 13-20—American Academy of General Practice. Miami Beach, Florida.

Apr. 19-22—American College of Surgeons. Postgraduate Course on Fractures and Other Trauma. John B. Murphy Memorial Auditorium, Chicago, Illinois.

Apr. 19-21—American College of Surgeons. John B. Murphy Memorial Auditorium, Chicago, Illinois.

Apr. 21-28—American College of Obstetricians and Gynecologists. Americana Hotel, Miami Beach, Florida.

Apr. 27-29—American Academy of Neurology. Sheraton-Cadillac Hotel, Detroit, Michigan.

May 2-3—American Pediatric Society. Hotel Traymore, Atlantic City.

May 8-12—American College of Physicians. Americana Hotel, Miami Beach, Florida.

May 22-24—American Thoracic Society. Netherland-Hilton, Cincinnati, Ohio.

May 22-25—American Orthopaedic Association. The Ahwahnee, Yosemite, California.

May 22-25—American Urological Association, Inc., Biltmore Hotel, Los Angeles.

May 29-31—American Gynecological Society. The Broadmoor, Colorado Springs, Colorado.

June 12-14—American Neurological Association. Hotel Claridge, Atlantic City.

June 22-23—American Rheumatism Association. Hotel Roosevelt, New York City.

June 22-26—American College of Chest Physicians. Hotel Commodore, New York City.

PLAN TO ATTEND

the

110th ANNUAL MEETING

of the

AMERICAN MEDICAL ASSOCIATION

June 25-30, 1961 **New York City**

MAY 1961
Volume 54 Number 5

Journal
OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

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Medics in Disaster

A full scale nuclear attack on the Continental United States with its attendant devastation, suffering, and terror, is a distinct possibility. The ability of our civilian population to recover from a nuclear attack may be the decisive factor in ultimate victory or defeat for our country. In terms of national survival in a general war, the effectiveness of Military Forces has very little meaning if our Country cannot maintain an effective civil structure after a nuclear attack.

Official Government reports have stated that Civil Defense preparedness could reduce the casualties of any assumed attack on the United States from approximately 25% of the population to about 3%.

The Federal Government is prepared to perform its role as set forth in the National Plan. Military forces are ready. State and local governments are making substantial progress in planning.

The National Security program aims at deterring attack and reducing vulnerability to attack by a complex pattern of military strength, world leadership, diplomacy and strategy. National Security is furthered by economic and military aid to allied and neutral forces, SAC (Strategic Air Command), and STRAC (Strategic Army Corps) units prepared to apply measured forces at appropriate times and places, radar intercept lines, air defense organization, and a strong Army Reserve and National Guard program.

This threat of nuclear attack with its capability of mass destruction of huge elements of our Nation has imposed upon the *Medical and Allied Health Professions* a tremendous responsibility. The saving of lives, particularly of those who can contribute to the survival efforts, will become extremely important, and the Medical and Allied Professions must assume a far larger role in our war potential than ever before. They face the greatest challenge. There will be a tremendous disparity between the medical personnel and supplies on the one hand, and the mass of casualties on the other hand.

It is one thing to speak in platitudes and another thing to study the situation with an eye toward providing the best medical service we can under the adverse circumstances. *The ability to cope with emergency situations is not an innate characteristic. This faculty must be studied and practiced to the same degree that any technical procedure is studied and practiced.*

Who is responsible for Civil Defense? Government at all levels, all industries, all governmental bureaus, all professions, and all *people* are jointly responsible. Disaster Medical Care is not some sort of separate entity unto itself.

Disaster Medical Care is not something which could spring into being in case of an enemy attack. The responsibilities for Civil Defense in general, and for Disaster Medical Care in particular, rest squarely upon every medical and allied organization, and, upon each individual doctor, and each person in the allied health professions.

The *Journal* of the Oklahoma State Medical Association is dedicating this entire issue to Disaster Medical Preparedness, and related Civil Defense, patriotic, and military matters. The practicing physician may glean much information from these factual, scientific, and organizational articles. It is hoped that some impetus will be given to the practicing physician to do some further "homework" in the study of the Communist threat, the United States' position and policy, effects of nuclear weapons, and details as to medical and surgical management of casualties. Retain this *Journal* in your library.

WILLIAM H. REIFF, M.D.
Chairman, Civil Defense Committee
Oklahoma State Medical Association



PRESIDENT'S LETTER

Civilian Defense

It seems reasonable to call your attention once more to the fact that the members of the Oklahoma State Medical Association should consider the possibility of being asked to participate in the care of the State in the event of emergencies. Disasters do come now and then, usually because of incidents over which most of us have little or no control. We now suggest that medical doctors might properly take more initiative in planning.

The specific recommendation is that each hospital in the State should have a Disaster Committee which will cause to be put in writing a plan for emergency care of large numbers of people. This should include the specific assignment of physicians, the allocation of reserve medical and surgical supplies, reference to other hospital personnel, the civic administration, the police and fire department. Extension of the planning might even include "stock-piling" of warm clothing and food, as well as shelter.

These suggestions are obviously inadequate and incomplete but the principal motive of this message is to urge that each medical doctor give some thought and preparation to the possible need which cannot be predicted.

Clinton Gallaher M. D.
President

STATE OF OKLAHOMA
EXECUTIVE CHAMBERS
OKLAHOMA CITY

J. HOWARD EDMONDSON
GOVERNOR

March 8, 1961

Dr. William H. Reiff, M. D.
Chairman Civil Defense Committee
Post Office Box 9696
Oklahoma City, Oklahoma

Dear Dr. Reiff:

The May issue of The Oklahoma State Medical Association's publication sounds as if it will be most interesting and extremely important.

The subject of Disaster Medical Care is close and important to all of us. You are all to be commended on the outstanding contribution which you are making in this field.

Sincerely,

J. Howard Edmondson
GOVERNOR

JHE/ih

OKLAHOMA
Civil Defense
CIVIL DEFENSE *begins* WITH YOU

P. O. Box 3365
Oklahoma City 5, Oklahoma
Phone JAckson 8-4421
Tom Brett—Director

May 1, 1961

Dr. William H. Reiff
Civil Defense Chairman
Oklahoma State Medical Association
P. O. Box 9696
Oklahoma City, Oklahoma

Dear Dr. Reiff:

Many times in the past, we have congratulated you, and members of your Civil Defense Committee, for your Civil Defense contributions -- and again -- we are most happy to forward to the Civil Defense Committee these brief, but most sincere, congratulations.

In this instance, and we feel there will be many more such instances, we refer to this issue of The Journal, published by the State Medical Association of Oklahoma.

Designated as a "Civil Defense Issue" -- it is just that. If other groups related the Civil Defense story in a like manner, then our problems would be fewer.

Again, our most sincere congratulations to you, all members of the Civil Defense Committee and the Oklahoma State Medical Association staff, for the thorough Civil Defense coverage in this issue of The Journal.

Sincerely yours,

TOM BRETT
State Director

TB/pd

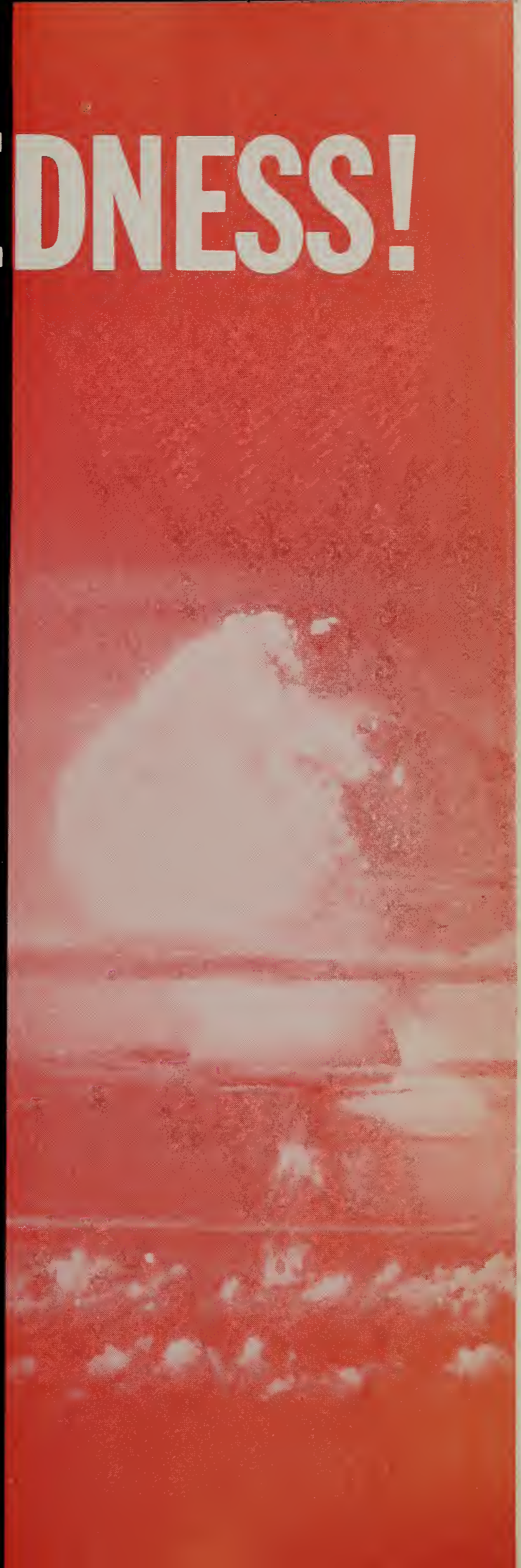
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PREPAREDNESS!

"We shall first dominate Eastern Europe, then the masses of Asia. Finally, we shall encircle the United States, as the last bastion of capitalism. We shall not have to fight. It will fall like an over ripe fruit into our waiting hands." **(Lenin, 1918)**

"Victory is now in sight."
(Krushchev, 1961)

"Let every Nation know, whether it wish us well or ill, that we shall pay any price, bear any burden, meet any hardship, support any friend or oppose any foe to assure the survival and success of Liberty."
(Kennedy, 1961)



CLYDE J. WATTS,
Brigadier General, USAR—Retired

Strategy for Survival



WE ARE AT WAR. A space age type of War, a protracted conflict in which our enemy has promised a materialistic God . . . his all powerful state . . . our utter annihilation.

In this all out War, we are making less than a halfhearted effort.

We sporadically demand of our scientists and military the security they are powerless to provide, because it is not their War . . . it is our War . . . a personal War made more sinister and more protracted by our inability to comprehend its objectives, its strategies, its tactics, or even our enemy, who has been charting his course behind barriers of land, sea and air that have lulled us into a sense of false security.

With the present compression of these barriers from days and miles into minutes and seconds (Oklahoma is now as close to Moscow as Berlin to Paris in 1940), we begin to recognize this enemy . . . powerful, brutal, determined, arrogant in his military might and scientific accomplishment . . . contemptuous in his cloak of invincibility.

Through the midst of his propaganda, he becomes more obvious; from his initial pronouncement of global objectives:

> "We shall first dominate Eastern Europe, then the masses of Asia. Finally, we shall encircle the United States, as the last bastion of capitalism. We shall not have to fight. It will fall like an over ripe fruit into our waiting hands." (Lenin, 1918)

down to his confident boasting of present accomplishment.

> "Victory is now in sight." (Krushchev, January, 1961)

It may be later than we know; but it is also earlier than they think. The weakness of power-mad dictators has ever been to under-estimate the latent forces of Freedom. Our survival is still within reach, but the time to reach is desperately short.

Our first reluctant awakening must comprehend the nature of the War our enemies fight . . . Psychological, political, social, economic, industrial, scientific . . . military . . . and must include the concept that the

non-military phase, though lacking the horror, is the more deadly, for it will set up the military phase as a brief but foregone conclusion, a violent, but final, climax.

We must understand that the terrain of this unconventional warfare transcends land, sea and air . . . involves a fourth and new dimension . . . the mind of all mankind.

We must next study our enemy . . . his objectives, his strategies, his tactics, as he has been studying us for forty years; and, with stakes of life or death, we must recognize that our enemy:

1) Has warned that "War to the hilt between Communism and Capitalism is inevitable and that the democracies, stupid and decadent, will rejoice to cooperate in their own destruction . . . in return for phony peace overtures."

2) Has through the means of a World Revolution, pledged his all to accomplish a Communist Utopia . . . after bloody elimination of Capitalistic opposition.

3) Has mounted a steadily accelerating offensive, to push us into a "nuclear corner," where we must choose between surrender or world destruction.

4) Has sold us his concept of "Peaceful Co-existence," with implied promise of easing "cold war tensions," which he alone controls, concealing that his concept of "Peace" means only that we will not seriously challenge his goals.

5) Has used the hope of "Peace" itself as an implement of psychological War.

6) Has built up, with Western aid, a Collossus of one billion slaves . . . a Frankenstein that challenges our very survival.

7) Has extended Communism over two-fifths of the land surface of the earth and is reaching for one-third more, including the Carribbean nations to form the boundary of a new Communist lake.

8) Has organized and supports a hard core Communist conspiracy in the USA with awesome capabilities, as evidenced by success of Communist organized, engineered and financed student riots against the House Committee on Un-American Activities, in San Francisco last May. (See J. Edgar Hoover report, "Communist Target—Youth.")

Finally we must study ourselves, recognizing that we are constantly being weighed in the balance of protracted War, that will change overnight from cold to hot, if and when we are found wanting. We must evaluate our strength and weakness; and resolve to mobilize our vast resources for the awesome conflict, before shifting of the balance of power past the point of no return.

What can we do? If our Government cannot meet the threat, if our leaders be not aware of the stark reality of our peril, how can we? We can! We must!! We shall!!!

We must recognize that our Government is us; and our leaders simply mirror the composite thought and motivation of their people.

We must reject the old truism that the most significant fact of history is man's refusal to learn from history; and avidly do our home work to learn what has produced our present dilemma. This will reveal:

1) In March, 1942, our President, expressing the sentiments of the vast majority of his people, wrote to Churchill:

THE AUTHOR



A native of Oklahoma, General Clyde J. Watts received his LL.B. degree from the University of Oklahoma in 1931. A trial lawyer, he has practiced throughout Oklahoma in State and Federal Courts. During World War II, he served in the Chinese and Burma Theaters as a combat liaison officer with the Chinese Army and as an artillery air observer. In addition to many citations from his own country, including the bronze star and air medal, he received a commendation by the Commanding General of Chinese Combat Command and the Yun Wei medal from the Chinese. Until June of 1960, he was Commanding General of the United States Army Reserve, XIX Corps Artillery, when he retired, by law, upon completion of 30 years service. He is active in both the Oklahoma and American Bar Associations, as well as many civic activities.

"By the time you receive this, you will have learned of my conference with Litvinov, and I expect a reply from Stalin shortly. * * * I think I can personally handle Stalin better than either your foreign office or my state department. Stalin hates all of your top people. He thinks he likes me better and I hope he will continue to do so."

2) Believing that Communists could be motivated by humanitarian motives, we made it possible at Teheran, Yalta and Potsdam for Communism to extend its domain over Eastern Europe and the millions of China, in order to enlist Soviet cooperation in creation of a new world order.

3) We witnessed the ringing down of an iron curtain over helpless peoples of the Captive Nations, who would have throttled their Communist enemies, had we been prepared to assure them the benefit of our Liberty and Justice, for which we had just fought the greatest War in History.

4) We can learn of our rejection of the warning of Churchill, in his 1946 Fulton, Missouri, speech that Communist promises and treaties are scraps of paper.

5) We can observe desperate efforts to deter further Communist aggression by a ring of bases and world wide subsidies.

6) We can even find apologists for these bases, as "increasing cold war tensions," forgetting that they were installed only for defense, and after the aggressive intent of the enemy became brutally obvious.

7) We can find organized theft of our nuclear and defense secrets by the most highly developed spy organization in peace time history.

8) We can find our people complacently oblivious to the stark reality of their peril . . . traditionally devoted to Life, Liberty and Pursuit of Happiness; but so intent upon pursuing happiness that loss of Liberty and even Life seems imminent.

9) We find ourselves, after bitter disillusionment, still equating the enemy's prime propaganda weapon, "Peaceful Coexistence," with an expression of a sincere desire to abandon the icon of his fanatic devotion to world revolution . . . and this so avidly that we have developed the distressing habit of referring to the second greatest butcher of all history by the affectionate appellation of "Nikita."

We must, by a dynamic awakening, as a chain reaction, where the spirit of each will pierce the air conditioned shell of complacency of all, produce a new DETERMINISM:

1) A determination that our Religion will be revitalized as an impenetrable roadblock against the further advance of Godless Communism. That we will meet the challenge of our unholy enemy that he is fighting a "holy war." (Krushchev, January 17, 1961)

2) A determination that we will know, meet and vanquish this enemy in every field of human endeavor in which he chooses to challenge us; and will select new fields of competition in which we are more adept than he.

3) A determination to know, appreciate and perpetuate, as the last bastion of Christian Civilization, this great Country of ours . . . making an *all out effort* our first order of business, and relentlessly wiping out those eroding weaknesses with which we no longer can afford to live, particularly the following:

a) Snobbery . . . which has been classed as the tendency to spend money we don't have to impress people we don't like, and certainly furnishes high octane fuel for expanding the class warfare upon which our enemy thrives.

b) Glorification of crime . . . in our press, T.V., radio, magazines and movies, which not only impose bad thought habits upon the subconscious minds of our people, especially youth, but steals precious time that should be spent in study of our biggest problem . . . survival. Consider the time and space that could be made available if no crime were publicized within a radius of more than one hundred miles from where it happened.

c) Sophistication: Where it has made us apologists for Amercanism; and replace it with a new birth of simple patriotism based upon sincere gratitude for the God-given privilege of being Americans. Recognizing that this is the only nation that seems to have outgrown a spirit of Na-

tionalism, we must foster a return to fundamentals that can be epitomized by the pledgings of our Lives, our Fortunes and our Sacred Honor upon the altar of our Country.

d) Graft, corruption, inefficiency in our government . . . recognizing that the governmental system of our enemy is staffed by scientists, experts and devoted Communists, we must consider the recent warning "concepts and patterns of a more secure past no longer fit present reality," and recognize that only the best in government can meet our competition.

4) A determination to re-establish discipline . . . in our homes, schools and daily life. The *discipline of force* employed by our enemy can be met by our *discipline of faith* only if our people, especially our youth, are trained to voluntarily and cheerfully do the right thing in the right place, at the right time . . . the classical concept of discipline for the American Serviceman. We need a new fad. With our marvelous mass communication media, could we not convince our youngsters that it would be "sharp" to say to elders "Yes, Sir" and "No, Sir," rather than "Uh, huh" and "Hunh, Unh" and "Yeah" . . . as an expression of respect for age and authority, of self respect, and of the new Determinism of which he is a part.

5) A determination simply to go to work . . . a columnist has recently said, "This is the era of the great 'goof off,' the age of the job half done. We have plumbers that won't 'plumb,' executives that won't 'execute,' business men that won't attend to business and workmen that won't work." Either America is going to WORK or a stronger civilization will put us to WORK.

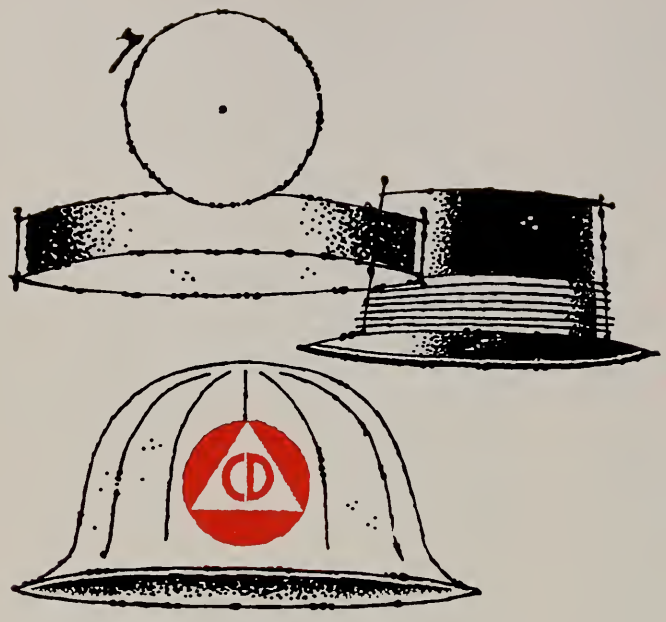
In conclusion, the challenge of new frontiers is gone, with only a faint echo remaining in the gunsmoke of Western movies and T.V.; but we face a new and more demanding challenge, into which our enemy has preceded us . . . the stratosphere and outer space itself, that can be conquered by the same Determinism that will insure our survival.

Our President has well stated, "Let every Nation know, whether it wish us well or ill, that we shall pay any price, bear any burden, meet any hardship, support any friend or oppose any foe to assure the survival and success of Liberty."

He cannot do it alone.

"The things that will destroy America are: Prosperity-at-any-price; peace at any price; safety-first instead of duty-first; the love of soft living and the get-rich-quick theory of life."

President Theodore Roosevelt (1906)



You, the Public, and Civil Defense

FRANK B. ELLIS

IN ORGANIZING his administration, President Kennedy reiterated in a public statement that civil defense operations are vital to national security, and must be performed with maximum effectiveness.

Shortly afterwards, the President sent a message to a group of State, county and city civil defense directors meeting with me in Washington. His statement further stressed the urgency of civil defense preparations by the States, cities and individual citizens in these words:

> "Unless we prepare now for emergencies, our freedom of choice could very well slip from our grasp. Each of us should actively seek to give wholehearted support to his local civil defense corps and its objectives. Survival in disaster can be achieved only when we join in a team effort for our mutual protection."

That is a stirring call for public cooperation, and I know the Chief Executive will give us the leadership we need to prepare our nation for survival if all peace-preserving efforts fail.

Elsewhere in this issue, the specific role of the physician and medical personnel will be explained by officials of OCDM and the Public Health Service. I will attempt here to outline some of the larger considerations that tie local civil defense and the efforts of each citizen to the paramount question of national survival in the age of the nuclear weapon.

Civil defense and military defense are joined today in a team effort to deter attack through preparedness. Our military power guarantees that any aggressor against the United States would suffer tremendous damage. A strong civil defense is essential to survival. Together, these national preparedness programs give the Nation a balanced defense.

Civil defense in the United States is a partnership of Federal, State and local governments. State and Municipal governments are responsible for measures to protect people and property from post-attack hazards. Industry, business, financial institutions, special groups and professional societies like the Oklahoma State Medical Association

have a responsibility to help State and local governments employ their skills effectively for survival and recovery operations. The individual citizen must make preparations to protect himself and his family from the effects of nuclear weapons, especially fallout. The Federal Government, through the Office of Civil and Defense Mobilization, is responsible for leadership and coordination to make State and local operations compatible with national security objectives.

The State of Oklahoma and its citizens in the medical profession are preparing to meet the challenge of nuclear disaster. To offset any destruction of hospitals in an attack, a dozen 200-bed hospitals are positioned in Oklahoma ready to be set up in an emergency. The State is preparing to construct an emergency center to direct civil defense operations. It maintains warning relay stations linked to the National Attack Warning System.

In 1959, your legislature approved a plan for succession in office of State executive, judiciary and legislative officials so the State would not be without leadership in an attack emergency. The first OCDM survey of a major city to determine its capacity to shelter its citizens from radioactive fallout was conducted in Tulsa, with splendid cooperation from citizens and officials.

To enlarge on a physician's skills and provide more emergency equipment, OCDM and the Department of Health, Education and Welfare are directing research on medical care and treatment of mass casualties. We must have simpler procedures in the management of patients under very adverse conditions, maintain a high level of freedom from preventable communicable diseases, and look for improved methods to combat chemical and biologic agents. We must press for more research on means to minimize the effects of radiation on humans.

OCDM will seek to increase its stockpile of medical supplies and equipment, and to place more emergency hospitals in strategic positions in every State.

The physician's other role in civil defense stems from his position of leadership in the community. He can urge and assist local government to create basic community defenses against the hazards of nuclear attack. Americans have become increasingly aware of these hazards. Many are beginning to understand the importance of fallout shelters. With vigorous leadership at the local level, the public will be ready to take self-protective measures.

Civil defense in the community does not necessarily start with meetings of officials or gatherings at the town hall. It can begin with the family in the home.

Each family can take simple, inexpensive steps to turn the family dwelling into a shelter for survival. These steps are contained in free publications distributed by every local or State civil defense office. Briefly, every family should know and take action on these five fundamentals of home defense:

(1) Know the warning signals and what they mean. A steady blast of 3 to 5 minutes means ATTACK ALERT—TAKE ACTION AS DIRECTED by local government. A wailing tone or short

THE AUTHOR



Frank Burton Ellis, LL.B., Director of the Office of Civil and Defense Mobilization under the present administration, was a New Orleans civic leader and attorney before accepting his present appointment. He was admitted to the bar in 1930 after graduating from Louisiana State University. Elected to the Louisiana Senate in 1930, he served as President Pro Tem for four years; was a delegate to the Democratic National Conventions of 1952 and 1956; and, a National Committee man from 1952-54. Mr. Ellis is responsible for advising the President on the Nation's non-military defense preparedness and emergency readiness programs and is a member of the National Security Council and serves as co-Chairman of the Joint United States-Canada Civil Defense Committee. Memberships are held in the Louisiana State, American and International Bar Associations and the American Judicature Society. He has held various appointments in New Orleans' cultural, civic and charitable organizations.

blasts for 3 minutes means ATTACK—TAKE COVER IMMEDIATELY IN BEST AVAILABLE SHELTER.

(2) Know your community plan for emergencies.

(3) Know the dangers of radioactive fallout and know self-protective (shelter) measures against radiation.

(4) Know how to use CONELRAD—640 and 1240 on your radio dial—for emergency information and instructions.

(5) Know basic first aid.

Physicians and medical personnel, with their knowledge of first aid and disaster precautions, already have mastered a civil defense fundamental.

The most widespread hazard of nuclear attack would be radioactive fallout. The survey in Tulsa was highly encouraging because it demonstrated that protection against fallout radiation exists in many of our large public and office buildings and apartment houses. With some modifications, every basement is also a potential family fallout shelter. The government and private construction firms have developed simple, inexpensive ways of incorporating fallout protection in basements. Free government plans are available at local civil defense offices or by writing Box Home Shelter, Office of Civil and Defense Mobilization, Battle Creek, Michigan.

A National Attack Warning System for the civilian population is on 24-hour alert at all times; it is steadily being expanded to keep pace with weapons developments. The system can now deliver a warning from radar outposts in the Arctic to key points in the 50 States in less than 15 seconds. In addition, OCDM has developed a new indoor system for warning people of impending attack. The system is being installed now in Michigan for final State-wide tests. The heart of the system, called NEAR (for National Emergency Alarm Repeater), is a small buzzer that plugs into any ordinary electrical outlet; it could be sounded by signals sent over a community's power lines. This simple, effective system could provide instantaneous warning wherever power lines reach. It would also have a valuable peacetime use in warning of major disasters such as floods and hurricanes.

Effective civil defense in the community stands on these three elements: Warning, fallout protection, leadership by government in emergencies. I know that the President relies on America's communities to give the Nation a firm foundation for civil defense. In OCDM, our objective, under the direction of the President, is to assure that every American knows the potential dangers of nuclear conflict, and to bring home to every citizen his obligation to prepare for survival and for the survival of his neighbors.

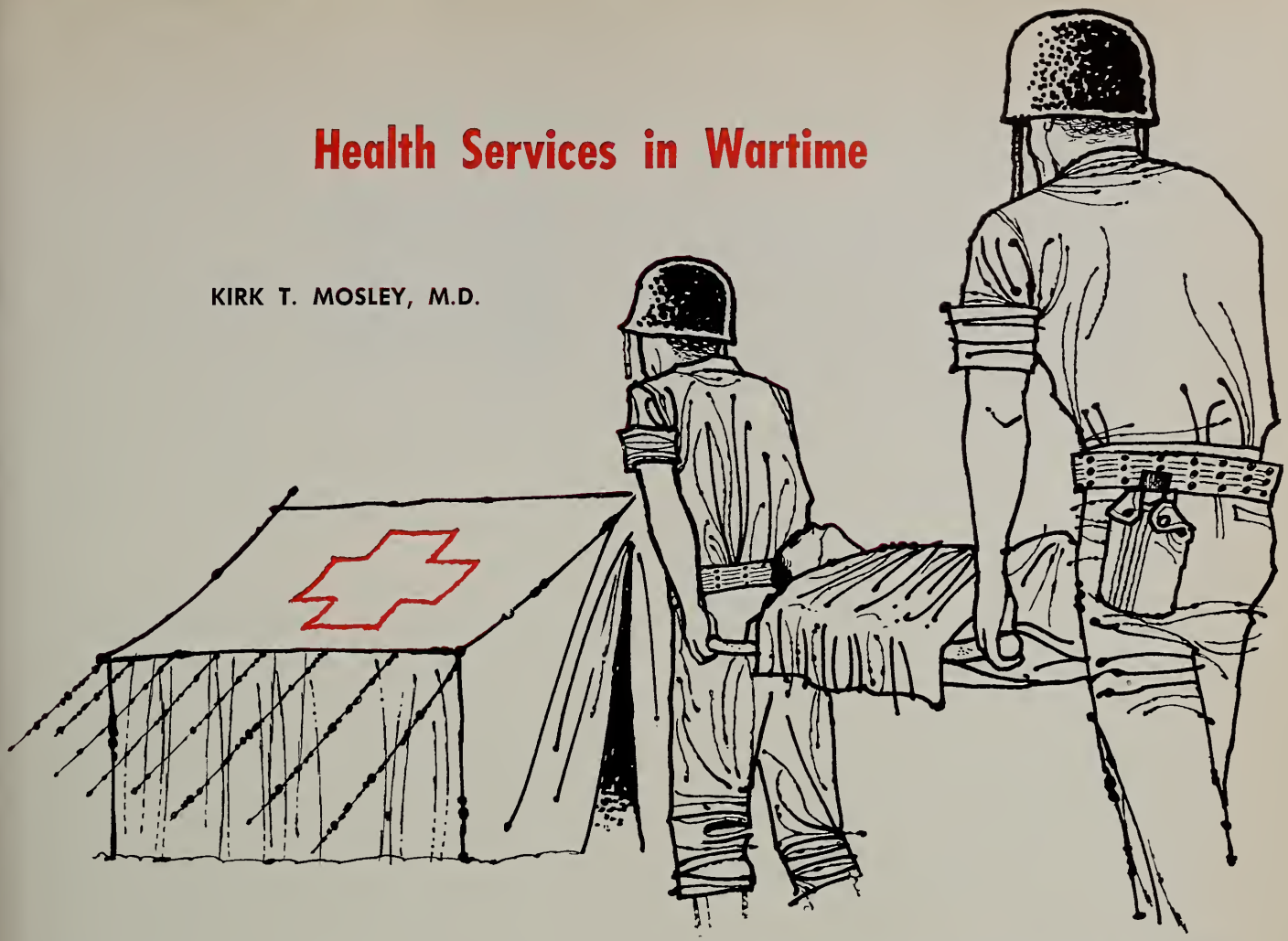
I am deeply gratified and encouraged by the decision of the Oklahoma State Medical Association to assist in this high mission by devoting its entire May *Journal* to civil defense. The members of the Association will find this *Journal* a guide for immediate action to expand civil defense readiness in Oklahoma.

Fallout Shelter Film Released

A 27-minute film showing a simple, step-by-step construction of a basement corner-type masonry block fallout shelter has been released by OCDM for public use. Sponsored by the national Concrete Masonry Association, Washington, D.C., the film should be particularly appealing to economy-minded, do-it-yourself families. It is in black and white, and has been cleared for television. Preview prints are available from OCDM Regions, and State and Territorial CD offices. Local CD directors may borrow prints from concrete block producers in their communities.

Health Services in Wartime

KIRK T. MOSLEY, M.D.



WE LOST 2,638 officers and men killed and 946 wounded at Pearl Harbor—a costly tragedy that catapulted the United States into World War II.

In the next war we could lose a half million Oklahomans—a tragedy that can be prevented.

Our civil defense plan is designed to prevent this tragedy—not to pick up the dead after it happens.

Following the Pearl Harbor attack, the equivalent of martial law had to be established in the Islands. Normal judicial processes were suspended, constitutional rights violated, citizens arrested and jailed arbitrarily, workers were frozen to their jobs and imprisoned for taking a day off. Health services passed under control of the Army, and physicians practiced medicine and surgery "at bayonet point" so to speak; all this because civil authority broke under the impact of a single strike by the enemy.

Those in a position to know believe that any future attack against the United States might come in the form of 50 or 100 "Pearl Harbors," and with as little warning. In our present state of non-preparedness, we would count our dead in millions—not thousands. Those of us who survive would be completely under military control because our civilian society is not organized or disciplined to function under conditions of modern warfare.

The Health Annex to Oklahoma's Emergency Operations Plan outlines procedures by which medical and allied services will function in wartime under their own professional disciplines and without the necessity for military control. This Annex is given the full effect of law by the Oklahoma Civil Defense Act of 1957. It assigns responsibility for civil defense against *all health hazards* to the State Department of Health.

Governor Gary by Executive Order dated July 1, 1958, directed that all State Departments "join in a concerted effort to implement, refine and be prepared to put into effect this Emergency Operations by the speediest and most expeditious manner possible."

Your Department of Health, with financial assistance from the Office of Civil and Defense Mobilization, is giving high priority to this prodigious task.

As an example of the magnitude and complexity of health problems arising from a mass thermonuclear attack, in Operation Alert 1956, a National Civil Defense exercise, there were 25 million casualties of which 19 million died by the 90th day. Forty million displaced persons were forced upon the remaining 100 million population, creating an insupportable supply burden. There were 32,650 casualties among physicians and 55,650 among our nurses. The loss of acute general beds was 37,300 and, in addition, 123,900 were rendered immediately unusable because of radioactivity. There was a loss of 14,400 long term beds and 35,100 additional unusable long term beds because of radioactivity. At that time, there were 1,700 general hospitals in the United States having a 100-bed capacity or greater and containing a total of 44,000 beds. The majority of these were located in metropolitan target areas.

The AMA Committee on Disaster Medical Care feels that, today, in a mass thermonuclear attack, casualties among physicians might reach 100,000, leaving only 160,000 M.D.'s haphazardly distributed among the surviving population, and having very limited facilities for diagnosis or treatment. Doctor Libby's testimony before the House Committee on Government Operations indicated that properly constructed shelters could reduce the area of immediate effects of thermonuclear weapons by 99 per cent, and the casualty area of fallout by 99.9 per cent.

As a means of preventing casualties and loss of facilities in Oklahoma, consideration is being given to the construction of complete underground hospitals, schools, government offices, warehouses, manufacturing plants, and even living and sleeping rooms in private homes. These would be thin-shell reinforced concrete domes or elongated domes, mass-produced at very low cost by processes under study at the University of Oklahoma Research Institute. When this program becomes a practical reality, the magnitude of any war-caused disaster in Oklahoma would be reduced to within our recovery capability.

The underground Annex to the State Office Building is the beginning of this program.

Figure 1 shows the probable fallout deposition area and total gamma dosage in Oklahoma following a typical thermonuclear attack against the United States with 2-megaton weapons. Ten-megaton weapons would cover much larger areas with far heavier dosages. It is estimated that the median lethal dose of external radiation is 450 roentgens received within a period of three to four days.

After a mass thermonuclear strike, most of the population of this state will be pinned down in whatever shelter is available for a period of several hours to two weeks, or more—pending decay of radioactive contamination to a tolerable level. Underground schools and hospitals three miles or more from ground zero will continue to operate without interruption. The Department of Health will work closely with Oklahoma Civil Defense in the underground Annex to the State Office Building, or in our own proposed subterranean office at 3400 North Eastern.

By the time people begin to emerge from shelter the total resources of the state will

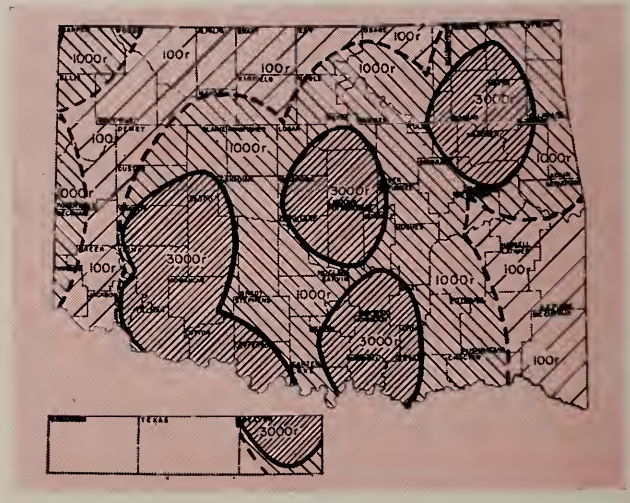


Figure 1

FALLOUT PROBABILITY CHART

Under the Oklahoma Emergency Operations Plan, the above chart is based upon the effects of two Megaton Weapons, exploding as surface bursts in a 30 mile per hour wind. Dark shaded areas represent the concentrated fallout pattern resulting from attacks on such cities as Oklahoma City, Tulsa, Lawton, Wichita Falls, Dallas or Fort Worth.

THE AUTHOR



Following his graduation from Tulane University School of Medicine in 1931, Kirk T. Mosley, M.D., served as a medical missionary in China. After returning to the United States, he received his Doctorate in Public Health from Harvard in 1941. Various positions with the Arkansas State Health Department were filled before Doctor Mosley was assigned to the Preventive Medicine Section of the United States Surgeon General's office. This included service as Theater Epidemiologist in the China-Burma-India Theater and later as Public Health Officer in the Civil Affairs Branch of the U.S. Forces in the China Theater. Returning to the United States, he taught epidemiology in several universities before coming to the University of Oklahoma in 1949. In 1960, Doctor Mosley became Commissioner of Health of Oklahoma. He is also an Associate Dean at the School.

have been mobilized for Operation Survival. Reception areas will have been established and OCDM emergency hospitals set up in priority. Medical supplies will be on the way from storage depots to areas where they are most needed. Radiologic monitors will have reported on the radiation intensity in every community in the state and the State Director will have advised residents via CONELRAD how long they should remain sheltered and what action they should take upon leaving shelter. Mobile field laboratories will cover the state checking potential health hazards.

During this period Oklahoma's Emergency Operations Plan will be implemented and the Department of Health goes out of existence for the duration. It is superseded by the Health, Medical and Special Weapons Services with the incumbent Commissioner of Health in command. These services operate through: 1) the Medical Care Division under command of Doctor William H. Reiff, 2) the Health Protection Division commanded by Doctor Forrest R. Brown, 3) the Supply Division under Mr. Floyd F. Harrington, 4) the Radiological Defense Service under Mr. Floyd Galpin, and a Special Staff headed up by Major Charles W. Dutreau.

The Medical Care Division is subdivided into four branches: Hospital Administration, Dental, Nursing, and Blood Program Coordination.

The Health Protection Division is broken down into Sanitary Engineering, Communicable Diseases, Chemical Warfare-Biological Warfare Defense, and Public Health Nursing.

When organization is completed, every member of the medical and allied professions in Oklahoma will be enrolled in one of these services. Every physician, dentist, veterinarian, nurse, medical technologist, etc., will be a member of a specialized team, or hold a position in the chain of command. Each person will have a primary and secondary mobilization assignment, and know exactly what his mission is.

The organization necessarily must be quasi-military in nature. Physicians and allied medical personnel will be asked to enlist through their own professional societies for emergency service under command of the Chief of Health, Medical and Special Weapons Services in their own county, a man whom they know and trust. County Medical Societies normally will serve as coordinating agencies. Operations and training will be in accordance with policies outlined by the Office of Civil and Defense Mobilization, as set forth in the American Medical Association's Report on National Emergency Medical Care.

Each employee of the Department of Health will have been given a mobilization assignment in advance, and every operation will be coordinated with DHEW, OCDM and the State civil defense agency.

If we all work and plan together under the leadership of the State Civil Defense Director, even though civil authority should break down in other states, necessitating a declaration of martial law, health services in Oklahoma will continue to function without military control—and in a manner that

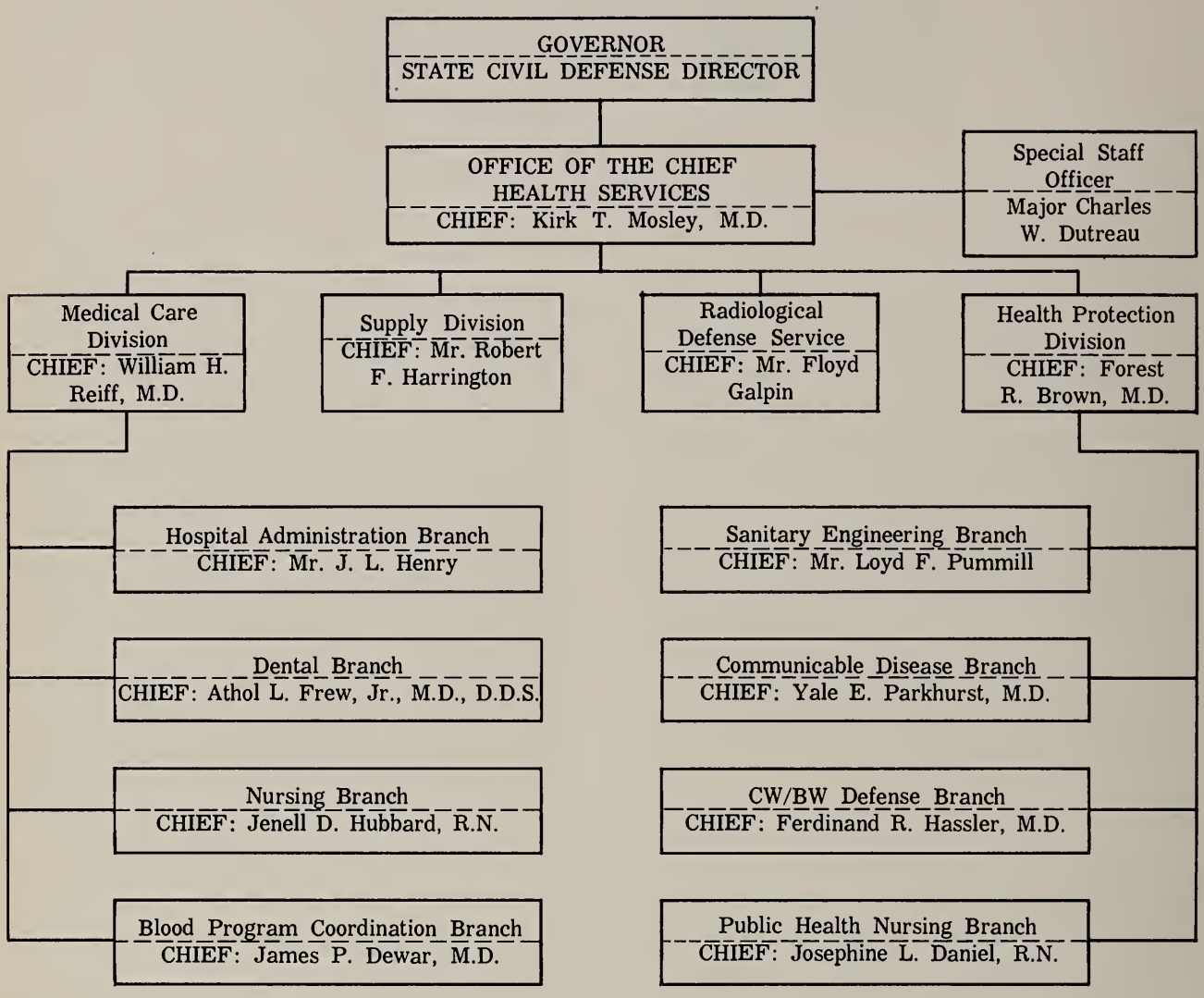
STATE OF OKLAHOMA

Health, Medical and Special Weapons Defense Services

ORGANIZATION CHART

Showing the Incumbent Chiefs of

Divisions and Branches at State Level



will bring honor and credit to the medical and allied professions.

Radiologic Defense

Protection against radiologic hazards is the most prodigious task assigned to the Department of Health by the Civil Defense Act of 1957. It involves implementation of underground construction programs for protection of personnel, planning for the restoration of contaminated agricultural lands to food crop production, examination and testing of food and water supplies for the presence of radioactive contamination, monitoring personnel being admitted to public shelters and hospitals, estimating the radiation dosage received by incoming patients, preparation of fallout prediction charts, the delineation of fallout areas following a strike, determination of actual radiation intensities throughout the state, estimation of the time that residents in each community must remain under shelter, determination of acutal decay rates within each fallout zone, advising the State Civil Defense Director as to the radiologic situation hour by hour, etc. The most important task that faces us in this area is the recruitment, organization and training of some 14,000 dedicated volunteers—people of in-

tegrity and a high degree of emotional stability—who can be depended upon to perform a vital job without pay, sometimes under hazardous conditions.

The Office of Civil and Defense Mobilization has established certain deadlines for the development of an organization and a radiologic defense capability. That agency has laid a requirement on Oklahoma for the establishment of 3,300 fixed radiologic monitoring stations by 1963; each station to be manned by four trained monitors and equipped with two sets of radiologic defense equipment containing six instruments each—to be maintained in operating condition at all times. Instruments will be furnished by OCDM. Maintenance must be provided by the State. Oklahoma Civil Defense and the Department of Health are working together on this assignment. We shall take the liberty to call upon our friends, the radiologists, to assist in our recruiting and training program.

Radio and TV station managers have been very generous in offering free time for an educational campaign to prepare our people for acceptance of this added responsibility of citizenship. Many churches and civic, patriotic and professional groups have pledged their support.

As of now, 42 County Health Departments in Oklahoma are equipped with radiologic defense equipment and have trained personnel to operate it. The State Highway Department has been issued 51 Geiger counters and survey meters which are placed strategically throughout the state in the hands of trained personnel. Complete sets of equipment have been supplied to 113 High Schools and educational institutions for training science students in the detection and measurement of radiation.

City and County Civil Defense Directors are sponsoring the radiologic training program. Most Directors already have quite a number of trained monitors and instructors on their staffs.

As soon as the dust settles following a thermonuclear strike, the State Civil Defense Director must know which areas are free of radioactivity so refugees may be directed to safe relocation sites. Only statewide coverage by fixed monitoring stations can provide this information quickly.

Shelter is the key civil defense measure for protection against radioactive fallout. We feel that a survival plan that does not provide for shelter is of very little value for the reason that—following a mass nuclear weapons attack—not enough people would be left to put it into effect.

Our state rapidly is assuming a position of national leadership in civil defense, particularly in the area of underground construction and shelter design. Much still remains to be done to assure the survival of the people of Oklahoma in the event of an all out national emergency.

Outdoor Advertisers Aid OCDM Warning System

On January 31, 1961 the outdoor advertising industry pledged the use of 12,000 highway billboards to the Office of Civil and Defense Mobilization for emergency messages. Under the agreement, previously prepared civil defense warnings will be pasted on billboards in 600 key points of the country within 24 hours after receipt of a declaration that an enemy attack is imminent. The signal for pasting up the warning signs, which read "If attack comes, tune radio to 640 or 1240," will be a "strategic warning" from OCDM. It is estimated the message would be visible to 130 million residents of cities of 25,000 or more in all parts of the country.

Report on National Emergency Medical Care

JOHN FLACK BURTON, M.D.



PRIOR TO the successful detonation of the hydrogen bomb in November 1952 and the uranium bomb in February and March 1954, medical aspects of civil defense planning had been concerned primarily with mass casualty care, little or no thought having been given t othe care and treatment of non-casualties.

With the advent of the larger weapons and the knowledge of their vastly increased destructive capabilities, civil defense began to take on a newer meaning—that of national survival with the capability of the surviving population to arise from the ashes of mass destruction and piece together the remaining segments of national economy. Likewise, the medical problem began to assume correspondingly larger proportions in that under this concept, medical care must now encompass not only the treatment and care of mass casualties, but must be extended to include non-casualties as well.

It was with this in mind that on December 11, 1956 the Federal Civil Defense Administration through the Director of its Health office, proposed to the AMA through its Council on National Defense, that under present thermonuclear bomb capacities casualty care per se could not be a single service, but would, of necessity merge into medical care for the surviving population as a whole, casualty and non-casualty. Because of the magnitude of the problem, the F.C.D.A. proposed that the AMA as the representative of organized medicine, become the primary contractor for a study of this problem.

The formal contract was signed July 26, 1957. The contract provided that the AMA "shall study, develop and recommend the planning, training, and operational organization needed as a basis for a National Emergency Medical Care Plan for the treatment and care of casualties and non-casualties prior to, during, and after a hypothetical 20 megaton ground burst thermonuclear attack upon a selected geographical area or areas in the United States."

For carrying out its responsibilities under the contract the AMA created the Commission on National Emergency Care. The Composition of the Commission was as follows:

H. C. Lueth, M.D., Evanston, Illinois, Chairman

THE AUTHOR

A 1923 graduate of Columbia University College of Physicians and Surgeons, John Flack Burton, M.D., limits his practice to his specialty, plastic surgery. He is certified by the American Board of Plastic Surgery and is a Professor of Surgery at the University of Oklahoma School of Medicine. A Fellow of the American College of Surgeons, Doctor Burton is a member of the Council on Medical Service of the American Medical Association. In 1957-58, he served as President of the Oklahoma State Medical Association.

John Flack Burton, M.D., Oklahoma City, Oklahoma

C. P. Hungate, M.D., Kansas City, Missouri

K. R. Lundeberg, M.D., Minneapolis, Minnesota

R. L. Novy, M.D., Detroit, Michigan

H. C. Schwyzer, M.D., St. Paul, Minnesota

Earle Standlee, M.D., Staff Director

Dean Schamber, M.D., Assistant Staff Director

Mr. Thomas G. Boardman, Staff Assistant

National health and medical organizations designated representatives to serve on three "task forces" created by the Commission to facilitate its work. These groups were:

1. Task Force on Organization
   Harold Lueth, M.D., Chairman
   Carroll P. Hungate, M.D., Co-Chairman
2. Task Force on Emergency Medical Care
   John Flack Burton, M.D., Chairman
   Hans C. Schwyzer, Co-Chairman
3. Task Force on Personnel Training and Utilization
   Robert L. Novy, M.D., Chairman
   Karl R. Lundeberg, M.D., Co-Chairman

During the next eighteen months the study groups met many times separately and from time to time all together. Finally on April 15, 1959 the completed report was sent to the office of Civil and Defense Mobilization.

The report embodied the following conclusions and recommendations:

1. A sound national civil defense medical plan is urgently needed.

2. There is at present no national system of shelters or other protective means in the event of an impending or actual mass attack on the United States.

3. Reception areas for the care of evacuees from target areas and population centers have not been prepared.

4. A majority of the industries producing essential medical and surgical equipment are concentrated and vulnerable to destruction.

5. An attack on the United States, with the present lack of preparation or protection, will seriously deplete existing medical resources, including personnel, material and manufacturing capabilities.

6. Under such conditions, the number of casualties will exceed the capabilities of surviving medical resources.

7. Preparation of and protection for the people of the United States against attacks are possible, and will result in fewer casualties and greater national recovery.

8. The medical profession must assume a dynamic leadership in health fields if this country is to be sufficiently prepared to withstand and recover from attacks.

9. Federal civil defense planning, training and operational agencies require assistance and advice from representatives of the medical, health and allied professions.

10. The least possible delay should ensure in preparing the people of the United States for mass casualty conditions.

11. Medical and health personnel should be trained for their duties in post-attack recovery operations.

12. Allied health personnel should receive extensive training in certain remedial and preventive medical procedures to assist in caring for survivors of an attack.

13. The population of the United States should be prepared for mass casualty conditions by a civil defense program of self aid and medical training.

14. Sound mass casualty treatment procedures, policies and principles should be promulgated to assure the greatest good to the greatest number.

15. Sound mass casualty administrative policies should be promulgated to assure the greatest good to the greatest number.

16. Medical and health supplies and equipment, including first-aid materials, should be stockpiled, based on sound estimates of mass casualties and treatment procedures.

This report has been published in its entirety, and, includes sections on medical planning, planning assumptions, the role of the medical profession, expanded function training, training objectives, treatment principles and administrative policies.

The report, which has been used as source material for some of the articles in this Journal, has also been published in summary form, copies of which are available through the OSMA.

Emphasizing some differences between mass casualty management, and normal treatment principles.

Excerpts from the AMA Report on National Emergency Medical Care

Abstracted by
Civil Defense Committee

THE CASUALTY producing energies released by thermonuclear detonations, whether from cannon, rockets, guided missiles, or bombs, are the same—blast, heat, and ionizing radiation. The effects which occur immediately and simultaneously, are augmented by damage from falling structures, secondary fires, and delayed fallout of particles contaminated by radioactive materials. Multiple injuries will be prevalent among the casualties.

Even in the thermonuclear age, the basic principles of surgery remain the same. The Mass Casualty techniques, simply listed in this article, have been taken from the AMERICAN MEDICAL ASSOCIATION'S REPORT ON NATIONAL EMERGENCY MEDICAL CARE. It is realized that some of the points made in this article are covered more fully in other articles in this issue. Copies of the complete summary reports are available from the Office of the Oklahoma State Medical Association.

Mass Casualty Treatment Techniques

I. TRIAGE — the professional medical process of classifying sick and injured according to urgency and types of conditions, so that the *greatest good* can be rendered to the *greatest number* in the *shortest time* within the means available.

Objectives

1. To see that maximum numbers of casualties are restored to effective recovery status quickly.

2. To give appropriate care to each casualty according to established priorities and within available resources.

a. *High priority*: Casualties who after minor treatment can help with recovery efforts of the diseaster area. Casualties whose conditions can be successfully treated with the use of small amounts of time, equipment, supplies and personnel.

b. *Medium priority*: Casualties whose conditions (following emergency care) can wait for definitive treatment without detriment.

c. *Low priority*: Casualties with conditions that make recovery seem unlikely.

3. Decrease morbidity and mortality to the extent possible.

Requirements

1. Professional medical skill.

2. Mature judgment.

3. Quick, sound decision-making.

4. Use of mass casualty treatment priorities (of above).

5. Capacity and census of own installation.

6. Expected number of casualties.

7. Capacity, census and locations of other installations.

8. Types, numbers and availability of evacuation vehicles.

9. Knowledge of evacuation routes.

10. Effect of supporting installations in evacuation of casualties.

Results of Triage Failure

1. Waste of time, personnel, supplies, equipment and facilities.

2. Increased disability.

3. Increased morbidity and mortality.

4. Prolonged convalescence.

II. TREATMENT PRINCIPLES—that will do the *greatest good* for the *greatest number* in the *shortest time* within the means available.

General

1. Simplify and standardize treatment procedures.

2. Control of hemorrhage, attainment and maintenance of a patent airway and treatment of shock are lifesavers. They have highest priority always.

3. Render no treatment that leaves a casualty less able to care for himself during the emergency period immediately following disaster.

4. Treat to preserve life rather than limb, and function rather than appearance.

5. Do the work you are most qualified to do.

6. Triage will be a continuing function at all medical installations.

7. Priorities on mass casualties:

a. Priority I—Those requiring outpatient care only.

b. Priority II—Moderately injured and ill whose recovery chances are good following immediate definitive treatment.

c. Priority III—Injured and ill not jeopardized by delay of definitive treatment.

d. Priority IV—Critically injured or ill requiring extensive, complicated, time-and/or-material-consuming procedures.

e. Priority V—Those who are beyond help.

8. Do not admit psychologically disturbed persons to hospitals treating the injured.

9. Do not remove patient from litter or stretcher until he has reached point of definitive treatment.

10. Group similar types of cases together.

11. Hold laboratory procedures to absolute minimum.

12. Hold x-ray examinations to absolute minimum.

13. If possible, blood-typing and matching to be carried out prior to transfusion.

14. Transfer to outpatient status or discharge patients as quickly as possible.

Morphine

1. Morphine and potent opium derivities may be administered only by qualified personnel.

2. Do not issue morphine or other narcotics to rescue workers, litter bearers, ambulance drivers, etc. for use on casualties.

3. Do not administer morphine or other potent narcotics to casualties showing signs of traumatic or hemorrhagic shock.

4. In treating injured personnel, use morphine only for purpose of relieving severe pain. (Since major wounds frequently are quite painless, there is no reason for morphine to be used solely because of the presence of such wounds.)

5. Do not administer morphine or other respiratory depressants to casualties suffering head injuries, severe chest injuries, respiratory depression or distress.

6. Use only the smallest effective doses of morphine when required.

7. Be sure to record the dosage of morphine on each casualty.

Anesthesia

1. During the immediate post-attack phase, anesthesiologists available in disaster and support areas supervise teams of less highly trained personnel in administration of anesthetics.

2. Use smallest of effective amounts of anesthetic agents on mass casualties.

3. Use local anesthetics for casualties with wounds of the extremities.

4. Use ether for most casualties requiring a general anesthetic.

5. Use local anesthetic wherever possible.

General Surgery

1. Direct main surgical effort to casualties suffering fractures and soft tissue injuries.

2. Use airway-to-airway artificial respiration.

3. Sucking wounds of the chest should be adequately closed by first-aid and definitive procedures at earliest possible moment.

4. Use tourniquets only in cases of hemorrhage that cannot be controlled by compression.

5. When using tourniquet, apply tightly enough to occlude arterial blood flow.

6. Do not remove tourniquet until definitive treatment is available. This entails possible loss of the limb.

7. Consider that casualties suffering mechanical or thermal injury have bacteriologically contaminated wounds.

8. Determine absence of sensitivity of those suffering mechanical and thermal injury who are known to have been immunized with tetanus toxoid, and give them booster dose of tetanus toxoid . . . and an adequate dose of antitoxin when necessary.

9. For the same type injuries who are not known to have been immunized with tetanus toxoid, an adequate dose of tetanus antitoxin should be given after determining absence of sensitivity.

10. Four units (2000cc) of dextran should be the maximum administered to any one casualty during the initial phase of treatment.

11. Practice maximum hemostasis in debridement of procedures to conserve blood.

12. In disaster and support areas, traumatic wounds, except wounds of the scalp, face and neck, should receive adequate debridement, be left open initially, dressed with moderate pressure dressings and closed secondarily when circumstances are favorable.

13. Traumatic wounds of the scalp, face and neck should receive adequate debridement, be closed primarily and dressed with moderate pressure dressings.

14. Superficial wounds of the chest should be debrided and left open while open chest wounds should be debrided and closed tightly, with the pleural cavity aspirated or drained.

15. Superficial wounds of the abdomen should be debrided and closed in layers, except that the skin is left open. If exploration of the abdominal cavity is indicated, the approach should not be made through a traumatic wound.

16. Definitive treatment of wounds of the stomach and small bowel consists of closure in accordance with treatment priorities.

17. Definitive treatment of wounds of the upper large bowel consists of exteriorization of the involved area.

18. Definitive treatment of wounds of the lower large bowel and rectum consists of closure, posterior drainage and protection of the wounded area by diverting colostomy.

19. Definitive treatment of the injured spleen consists of removal rather than repair.

20. Definitive treatment of the injured liver and pancreas consists of repair and adequate drainage.

21. The casualty with an injured kidney may be managed conservatively.

22. A torn or ruptured bladder should be treated as a suprapubic cystostomy or closed and protected by an indwelling urethral catheter.

23. A casualty who is unconscious or semi-conscious following surgery should be placed on his side.

24. Traumatic wounds of the joints receive adequate debridement, to include removal of detached bone, cartilage fragments and foreign bodies, followed by irrigation and closure of the capsule, and immobilization if indicated.

25. In all traumatic wounds, bone,

nerves, vessels, tendons and testes should be covered with tissue upon completion of debridement.

Orthopedics

1. Initial amputation procedures should be the open circular type in disaster and support areas.

2. Fractures of the long bones should be splinted prior to movement of the casualty whenever practicable.

3. As a general rule, fractures should be splinted without traction.

4. Casualties who have sustained closed fractures of the small bones and closed fractures of the upper extremities should have their fractures immobilized and be placed in treatment priority I and handled as outpatients.

5. Casualties who have sustained closed fractures of the long bones of the lower extremities should have their fractures immobolized and be placed in treatment priority III.

6. When limbs are splinted, casted or bandaged because of fractures or burns, the joints should be placed in functional position.

7. When the use of plaster is required in the treatment of injured extremities, it should be applied in the form of splints in preference to casts.

8. Casualties who require a splint and traction should have adequate padding applied to those portions of the limb subjected to pressure and circulatory restriction.

9. Plaster casts, when applied to extremeties should be bivalved as soon as the plaster is set.

Ophthalmologic Injuries

1. To the extent practicable, ophthalmologic surgery should be performed by ophthalmologists.

2. Dressings and bandages should be lightly applied to injured eyes.

3. When one or both eyes are severely injured, both eyes should be occluded by lightly applied dressings.

4. Casualties with eye injuries who cannot be evacuated as litter cases should have a pinholed opaque disk placed before the uninjured eye and be escorted by an attendant.

5. The decision to enucleate an injured eyeball should be made by an ophthalmologist, whenever possible.

6. First-aid care of ophthalmologic injuries consists of prompt flush of the eye with plain water, if superficial foreign bodies or chemicals are present, and application of a loose fitting bandage or dressing. Local anesthetics and mild antiseptics, if available, may be instilled into an injured eye to relieve pain and prevent infection.

7. Ointments should not be applied to a perforated eyeball or one with a poorly sutured wound.

8. Casualties with intra-ocular injury, perforating or other serious wounds of the eyeball have a high priority for evacuation as litter patients for ophthalmologic care.

9. Casualties with traumatic intra-ocular hemorrhage should be referred to an ophthalmologist whenever possible.

10. Casualties with foreign bodies in the eye that cannot be removed in two gentle attempts should be referred to an ophthalmologist, whenever possible.

11. Lacerated eyelids should be repaired by an ophthalmologist, whenever practicable.

12. The cornea of injured eyes should be protected from drying. Temporary suturing of lacerated lids or suturing one lid to another to cheek or eyebrow should be employed, if necessary.

Thermal Injuries

1. Use the open method treatment for thermal burns. For ambulatory burn cases, a suitable protective dressing may be applied. Antibiotics will be used in suitable cases.

2. Casualties with second degree burns of 20% or less of the body surface should be placed in treatment priority I and treated as outpatients under mass casualty conditions.

3. Casualties with third degree burns of 40% or more of the body surface should be classified treatment priority IV under mass casualty conditions.

4. In the treatment of casualties from a nuclear blast, medical units screen incoming patients for radioactive contamination.

Radiation Injuries

1. Medical units are responsible for decontaminating incoming patients who are contaminated with radioactive material and maintaining uncontaminated installations.

2. Until there is available an accurate method of estimating or determining the amount of radiation to which personnel have been exposed, the degree of radiation injury sustained by casualties, as a result of a nuclear detonation, should be determined on a clinical basis.

3. Casualties known to have suffered a fatal dose of radiation and those showing early severe signs and symptoms of radiation injury following a nuclear detonation should be placed in treatment priority IV.

4. Since antibiotics are not indicated in the prophylactic treatment of radiation injuries per se, they should be administered to radiologically injured casualties only if other indications for their use are present.

5. Since whole blood is not indicated in the prophylactic treatment of radiation injuries per se, it should be administered to radiologically injured casualties only if they have lost blood.

Disaster Fatigue

1. Use barbiturates as indicated for the relief of apprehension and anxiety. Narcotics are not indicated in the relief of these conditions.

2. Individuals manifesting disaster fatigue should be given psychological first-aid on-the-spot by non-medical personnel.

3. Since most individuals, temporarily distraught as a result of mass attack, will require only psychological first-aid, disaster fatigue cases should be removed to reception areas for temporary housing and feeding only if their ineffective behavior persists subsequent to administration of first-aid.

4. Only those cases of disaster fatigue which fail to respond to simple treatment in reception centers should be evacuated to mental hospitals.

Evacuation

1. No casualty from a disaster or support area should be evacuated to a more highly specialized medical treatment facility than is required by his condition.

2. Do not evacuate those cases whose chances of survival are poor if moved from one medical facility to another.

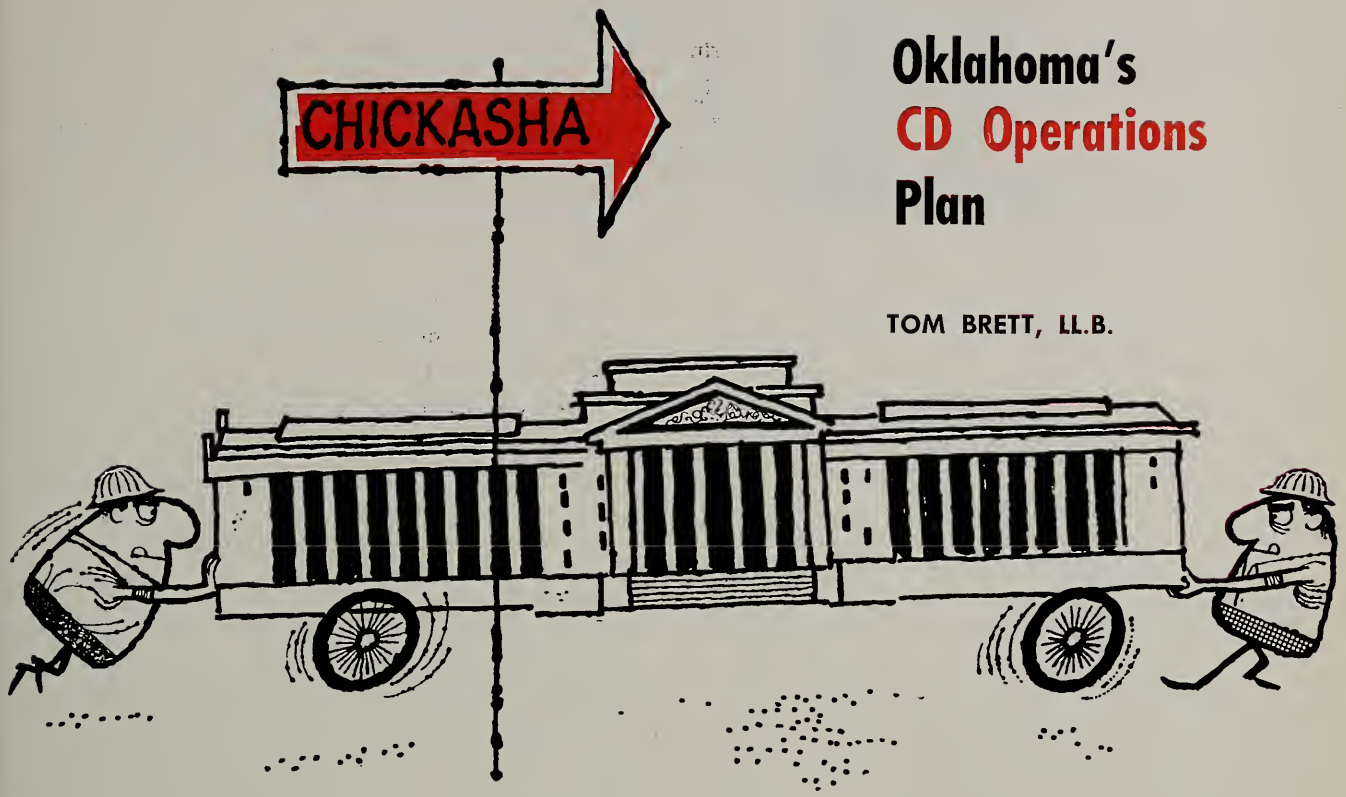
3. Move in prone position those casualties suffering suspected or real fractures of the spine (except of the cervical region).

4. Move in a supine position (with the head adequately supported) those cases suffering real or suspected fractures of the cervical region of the spine.

5. Place unconscious casualties on one side for transportation. This position should be maintained until definitive treatment may be administered. In the event placing a casualty on his side is not practicable, the head should be turned to one side to prevent the aspiration of vomitus and secretions.

6. Unconscious casualties with fracture of the mandible should not be transported if bandaged so tightly or otherwise splinted that opening of the mouth is prevented.

7. Conscious casualties with fractures of the mandible may be transported with the jaws tightly bandaged or otherwise splinted, provided the attendant is so informed and possesses the means to remove the bandages or splinting materials expeditiously.



Oklahoma's CD Operations Plan

TOM BRETT, LL.B.

THERE IS a black and white—and tested—state level civil defense operations plan. Nearly one inch thick, the printed civil defense plan is officially titled, "Emergency Operations, State Government Plan."

Like medical science, the state level CD operations plan undergoes revisions and updating to keep up with the times. At the present time, five of the 23 annexes, which make up the CD operations plan, are being revised because of changing times.

The plan, originally drawn by a special force paid from federal funds, transforms state government into a civil defense unit for the protection of the civilian population, and sets out in detail the functions of the various state agencies during a state of emergency.

However, because of the enormity of the problems involved, drafters of the CD plan found that state agencies, by themselves, could not provide the full force that is needed for complete coverage on a state-wide basis.

The plan relies heavily, therefore, on a similar, all-out civil defense effort by all county and municipal governments, each of which has independent planning to accomplish. It is obvious that these local civil defense programs must be keyed to supplementing the state CD plan. It is generally agreed that the key to a successful CD program lies in the strength of the local civil defense units.

Local CD Guides Prepared

The state civil defense office does not "blueprint" plans for local CD organizations, but a complete "Guide To Local Planning" has been prepared, printed and distributed to local CD directors. The guide was prepared with the cooperation of Grady county officials in 1958, and as the title clearly indicates it is a "guide" and is not a mandatory plan for all local CD units.

Although 100 per cent uniformity would be the ideal situation, state CD officials realize that various differences in different

THE AUTHOR



Tom Brett, LL.B., joined the Oklahoma Civil Defense staff as director of operations in 1952 and became State Civil Defense Director in 1955. A veteran of 20 years military service, he holds the rank of Lieutenant Colonel in the Airforce Reserve. During World War II, he served in the European theatre where he was awarded the Silver Star and the Purple Heart. In 1950, while practicing law in Norman, Oklahoma, he was recalled to active duty with Oklahoma's 45th National Guard Division in Korea. Mr. Brett is a member of the Oklahoma Bar Association.

localities prevent this from becoming a reality in the near future. In some instances, the differences are local statutes, or laws, and in other instances it might be geographical areas. And, in some cases, it is a matter of local leadership.

And, although local plans lack complete uniformity, slightly more than 100 Oklahoma towns do have some form of a disaster, or civil defense, plan of action. The Oklahoma Civil Defense does not advocate elaborate "volume-type" plans, but does urge "a simple plan that is geared to the ever-present natural disasters." If a town can't cope with a natural disaster—then the problem of a nuclear attack is beyond any possible comprehension.

If towns and cities begin with a simple plan, designed for natural disaster purposes, then this same plan can be used as the foundation for a more comprehensive plan for man-made emergencies. Basically, both types of emergencies, natural and nuclear, require the same planning for the major differences in the two types of disasters are "degree and scope." Without adequate civil defense planning, either type of disaster would bring additional loss of lives and property.

With or without completed local CD planning, the state level civil defense operations plan would swing into action as the result of an Executive Order, dated July 1, 1958, issued by former Governor Raymond Gary.

The executive order includes the usual number of "whereas's," but it is clearly defined as meaning, "In the event of an enemy attack, every agency of state government would abandon its normal operation and assume a specific role in civil defense." The state CD plan "spells out" the specific role of each state government agency.

Designed to counteract aggression of the worst proportions, the plan is drawn under assumption that the enemy is capable of striking any community in Oklahoma, and that the aggressor will use, among other things, nuclear weapons of large yield to knock out military bases and centers of population.

In the over-all state level CD planning, considerable emphasis is placed on Tulsa and Oklahoma City because of their military establishments and density of population. Then, too, should these two cities be the only targets of an attack, the impact of their emergency operations would be felt in many other sections of the state with near staggering force.

Eight Targets Affect Oklahoma

Eight localities have been designated as prime targets. Four are in the state. The other four are out-of-state, but near enough to cause possible disaster in Oklahoma in event of attack against them.

These targets are Oklahoma City, Tulsa, Altus and Clinton-Sherman airforce base, all within the state; Sheppard airforce base and Perrin airforce base, both in Texas; Fort Smith, Arkansas and Liberal, Kansas.

Writers of the 300 page—22,500 word plan admitted that suitable shelter was not available in the event of a nuclear attack, therefore, and if warning were sufficient, the answer would be evacuation of the population. County and City governments are held responsible for evacuation of their own citizens—at their own discretion and in accordance with their own plans. The state will lend support. Because warning time has decreased considerably since the plan was written, revisions, now underway will

add more emphasis on "family-type fallout shelters" instead of mass evacuations. These shelters, if so constructed, can double as tornado shelters.

Eight CD Areas

For operational purposes, the state has been divided into eight emergency areas—with each area consisting of several counties. Area headquarters include Oklahoma City, Tulsa, McAlester, Ardmore, Lawton, Clinton, Alva and Woodward. In each instance, alternate area headquarters are listed.

At the present time the area concept is not operational to the point that it could be effectively utilized to combat the effects of a major disaster. Before the area concept can become a working reality, it will be necessary that every county and city complete their local CD plans—for an area plan cannot be fully operational without counties and cities within area boundaries.

Like an automobile, the area plan needs "sparkplugs" and in the civil defense instance, cities and towns are the "sparkplugs."

Who Does What

Actions to be taken by state agencies in the event of emergency vary from moves that seem highly expected to some that appear unique.

An example of a unique assignment is the responsibility of Oklahoma College for Women in Chickasha. If warning is adequate, the college is charged with relocating the seat of state government and the state CD control center from the capitol to its campus.

Although this responsibility is presently charged to the women's college, there is a possibility, based on radiologic fallout patterns, that Oklahoma State University in Stillwater will assume this responsibility. But, in either instance, this is one of the unique planned actions of state agencies.

As might be expected, the Department of Public Welfare is charged with the lodging, food and clothing of distressed persons. This department has very detailed plans. The State Department of Public Safety (highway patrol, etc.) is held responsible for three services: police, communications and warning.

The State Military Department is to head the intelligence phase; the State Highway Department is responsible for engineering problems; the Oklahoma Employment Security Commission is charged with manpower; the State Treasurer to handle fiscal matters and the Attorney General will be responsible for legal problems.

These are only a few of the 23 different phases or responsibilities of an organized civil defense effort. In each instance, the individual state agency has a prepared plan of action. In most instances, an individual agency plan outlines, in detail, the steps that are to be taken in the event of a large-scale disaster.

The Army's Role in Civil Defense

By law, Civil Defense is a civil responsibility, vested jointly in the Federal Government, the states, and the political subdivisions. An adequate civil defense program is vital to national survival in general nuclear war, and to the ability to continue the war to a successful conclusion. Civil defense is an essential element of the general war deterrent. The effectiveness of civil defense depends largely on local and individual effort.

Army support is given to civil defense, both for preparatory, and for emergency roles. In the preparatory phase, such support is rendered to maintain readiness for a civil defense emergency. In an emergency situation, the Army support consists of all aid which can be made available as military requirements permit. In both instances, military support complements, but does not substitute for civilian participation.

Army readiness to execute civil defense emergency support missions is accomplished by contingency type planning which takes advantage of the existing organization, dispositions, and command structure of Army forces, both active and reserve. Army plans support existing civil authority, and assume operational control only when civil authority is ineffective in an emergency.

Specific Army units will not be designated as civil defense forces by pre-commitment or otherwise setting aside certain forces as sources of manpower or supplies, for possible civil defense tasks.

The Army will continue training in civil defense for all units to the extent necessary to assure a capability to execute expected civil defense missions. Training activities include emphasis in service schools, and in all active and reserve units.

The Army is responsible for coordinating the planning for use of military forces, and for controlling military support to civil authorities, for all of the military services.

It would seem that the following are basic:

1. Civil Defense is an essential element of the over-all United States defense posture, and is a CIVILIAN responsibility.

2. Although the Army will take a positive approach toward meeting the civil defense emergencies which exist in a general nuclear war, the PRIMARY MISSION of the Army is the conduct of land combat operations.

3. The over-all responsibility of the Army, relative to civil defense, is to be prepared to conduct emergency operations in support of civil authorities, under conditions of disaster resulting from a massive nuclear attack on the United States. This responsibility also includes coordination of the planning for, and coordination and control of the rendering of, civil defense support provided by the Navy and by the Air Force. The objective of all planning is to ensure a capability for rapid and effective response to civil defense emergency situations requiring military support.

Medical-Radiologic

For two reasons—relationship and willingness—the State Department of Health has two full-time assignments in the state civil defense operations plan.

The State Health Department is charged with HEALTH and RADIOLOGIC aspects.

The mission of the State Health Department is to plan and provide for:

1—Emergency care and treatment of civilians and emergency government casualties resulting from enemy attack;

2—Emergency care and treatment of non-casualty population;

3—Emergency public health epidemiologic and sanitary engineering services under disaster conditions;

4—Preventive and remedial measures against chemical and biologic warfare attack, as well as the minimization of the radiologic effects of a thermonuclear attack;

5—The logistics of medical supply and transportation incident to disaster operations.

Readily noted is the fact that the five missions of the State Health Department include everything, even remotely, related to the medical field. These five missions make up a "man size task."

It might be pointed out here that the plan calls for use of the extensive hospital and clinical facilities, as well as the professional staff, of the State Mental Health Department.

Medical Activities

In reality, and within the health phase, certain activities are intended to be responsibilities of the Oklahoma State Medical Association, the State Hospital Association and the State Nurses Association.

Specifically, the medical treatment phase is intended to be supervised, controlled and implemented by the Oklahoma State Medical Association, the State Hospital Association and the Nurses Association.

The emergency public health requirements —and requirements in chemical, biologic and radiologic fields — will fall directly under the supervision and coordination of the state health department.

For the first time since the plan was prepared, the State Health Department has the services of a full-time civil defense liaison officer. Major Charles W. Dutreau, a retired chemical corps officer, and an original member of the Oklahoma CD training school instructor's staff, joined the State Health Department on January 1 of this year. Civil

defense funds provide one half of his salary and expenses.

At the present time, he is developing appropriate lists of capabilities within the special medical professions. He will then attempt to correlate and coordinate activities of these various professions and specialties, during coming months.

In many respects the state health plan is ahead of other phases of the state CD operations plan, but to maintain this lead there will have to be increased local level CD planning.

At the local level—cities and counties—the development of emergency medical plans is the responsibility of doctors, nurses, hospitals and other medical specialists. In the last year, the greatest advance in Oklahoma, on the local level, has been made in Oklahoma county.

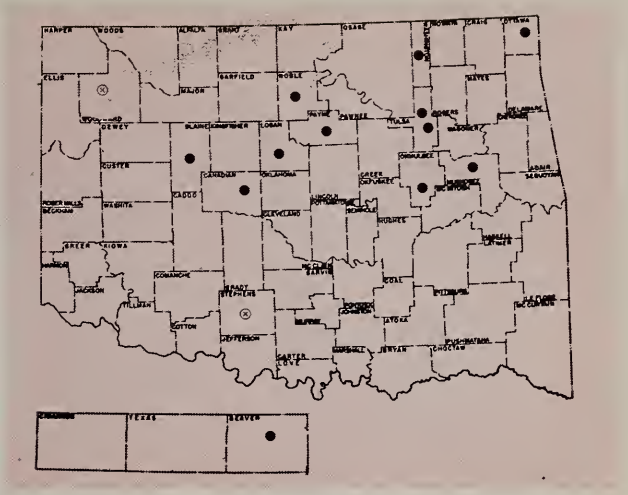
Long the laggard in local civil defense planning, Oklahoma county moved into high-gear during the past 18 months and in doing so passed many other localities. Up to this point, personalities have not been mentioned, but in the instance of medical and health planning in Oklahoma county—it might be well to point out that two medical doctors, William Reiff, M.D., and Joe M. Crosthwaite, M.D., have played leading and responsible roles in forming local CD medical plans.

Equipment and Supply Assistance

In some respects, local medical planners have more aids in completing their plans than do the other civil defense services. With hospital beds always in demand, a major disaster would increase the demand even more and to aid in eliminating this critical problem, 12 civil defense emergency hospitals, 200 beds each—have been stored at different locations throughout the state.

These 200-bed civil defense hospitals are equipped with everything from bedpans to portable x-ray machines. They have self-contained power supplies and are designed to be set up in large areas such as public schools.

On a smaller scale — and scattered throughout the state—are nearly 30 first



200 BED EMERGENCY HOSPITALS

OKLAHOMA

•200 Bed CD Hospitals

Henryetta
Muskogee
Guthrie
Tulsa (2)
Miami
Beaver
Watonga
Bartlesville
El Reno
Cushing
Perry

⊙ Proposed Locations

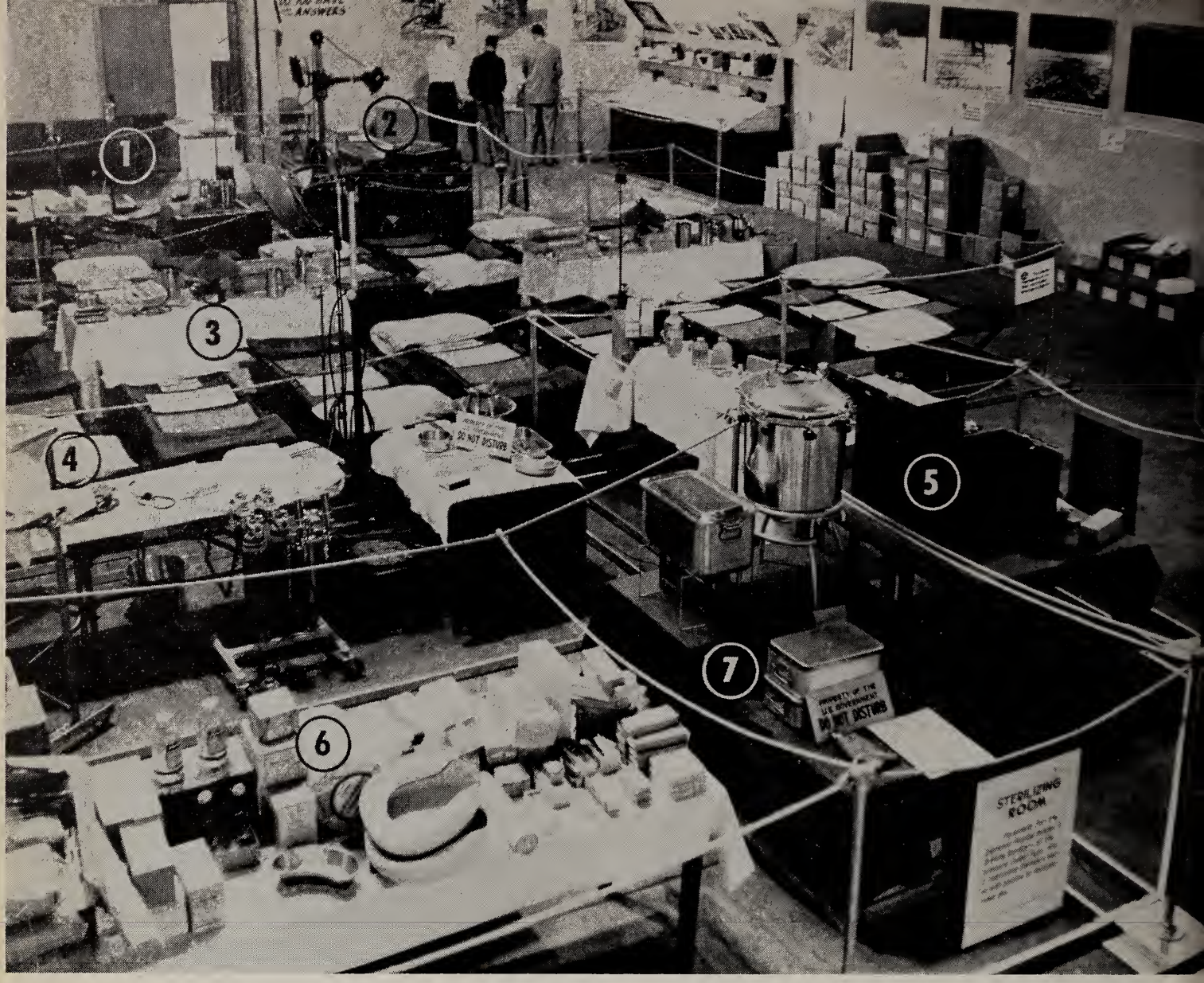
Duncan
Fort Supply

aid type units, designed for treating up to 300 persons, depending on the types of wounds, etc. These waterproofed and crated units were purchased by the state civil defense headquarters, on a matching funds basis, and are located in Durant, Tulsa, Oklahoma City, Stillwater, Watonga, Okemah, Cushing, Ponca City, Lawton, Okmulgee and Nowata. Other locations include Beaver, Guymon, Fort Supply and Elk City.

Another aid to local CD medical planning is a resources study listing medical items (in quantity) that are usually in supply houses. This listing is in addition to hospital supplies, drug stores, doctors' offices and clinics.

Examples of the resources study show that normally there are 3,500 dozen hypodermic needles; 15,000 quarts of intravenous solutions; 200,000 pounds of absorbent gauze; 10,000 feet of rubber tubing; 100,000 razor blades; 1,200 pairs of surgical gloves and many other items essential to the medical profession.

Being aware of available supplies, locations of CD 200-bed hospitals, locations of the crated first aid units and all other available supplies and equipment—members of



A display of the professional equipment and supplies contained in a 200 bed Civil Defense Emergency Hospital is shown above. The numbered items in the photograph are: (1) Receiving Station; (2) Portable X-Ray; (3) Ward Supplies and Equipment; (4) Operating Room; (5) Laboratory; (6) Central Supply; (7) Sterilizing.

the medical profession then must join with local civil defense directors and prepare local CD medical, or health, plans.

They should designate assembly sites and alternate sites. They should take advantage of Red Cross trained first aid workers and group them into teams of four or six, for they will need the additional assistance of these trained persons.

They must make arrangements to supplement the normal number of ambulances with the use of stretcher-equipped bread trucks and similar vehicles. Pre-disaster, or civil defense, planning should include "means of identification of authorized personnel in damaged areas."

A local disaster plan for medical purposes might be described as, "Who does what, where, why and how in the event of a large-scale disaster." Whether the plan is simple or comprehensive—these questions must be answered.

When the plan is completed and all persons concerned have been informed of their spective roles then one factor remains before the local CD plan picture is complete. "The plan, regardless of how well written, must be tested. Like a ship, 'there must be

a shakedown cruise to eliminate bugs'." Then, too, if the plan is never tested no one will know for sure if it will work. Disaster conditions must be assimilated and plans tested, otherwise it will almost be wasted time.

As mentioned earlier, the state operations plan is 22,500 words long, therefore, this article should not be construed as the state plan—but it is a general and basic description. Local civil defense directors have copies of the OFFICIAL GUIDE TO LOCAL CD PLANNING, based on studies conducted in Grady County. These local CD officials should have provided county medical associations with the annexes that govern medical aspects.

Records in the state civil defense headquarters reveal 315 "names" serving as local CD directors. As indicated by the quotation marks—some of the local CD directors are merely "names," but in most instances they are active, hard-working and dedicated individuals—trying to do a job.

It might be that they haven't had an opportunity to contact your county medical association, therefore, it might be to your advantage — and certainly theirs — for you to contact your local civil defense director. Your contact might be the igniting spark for an active civil defense in your county or city.

Packets, Films For County Medical Societies

A specially prepared packet of basic civil defense publications is available upon request. In this instance, we have reference to "handout types." This packet contains slightly more than 20 different pamphlets describing everything from Tornado Precautions to Facts About Fallout Protection.

These are suitable for your regular meetings. We suggest that County Medical Association CD chairmen request a packet, review the different publications—then request an allocation of only those publications they feel necessary or interesting for each member. These publications are free of charge.

FILMS

The Oklahoma State Civil Defense Office has the largest CD film library in the southwest. These films, like publications, are yours for the asking. No rental fees, only return postage is required. Naturally, films must be returned promptly.

If you desire a copy of the 1961 Oklahoma CD film catalogue, please let us know.

If you desire films, publications or some form of assistance, or guidance, address your correspondence to:

OKLAHOMA CIVIL DEFENSE
P.O. Box 3365
Oklahoma City 5, Oklahoma



Preparation for Disaster

ROBERT G. JOHNSTON
Colonel, USA—Retired



Civil Defense is an expression that has come to mean different things to different people. Actually Civil Defense is a program of planning, education, organization and training to prepare the citizens and their local governments to withstand a massive nuclear attack and to be able to fight back and preserve our Nation and our Way of Life. Developments of faster delivery means and the increased power of the weapons during the past few years make it abundantly clear that unless the citizen and his local government are prepared to be self sufficient, at least in the first few weeks after an attack, the toll of human destruction will be fantastic.

Fortunately there exists in our society the means both for protection and recovery. There are some fundamental concepts that should be recognized.

a. Everyone who survives the blast can live if they will do those things that are recommended.

b. Governments at all levels must plan and organize now so that they can absorb the shock of nuclear disaster and continue to function.

c. The military will be so busy fighting the war that local governments must not expect assistance from them.

d. The first priority of all agencies of the Federal Government will be those functions that immediately contribute to the war effort, i.e., restoration of industry, transportation, etc.

e. Every function of government that exists in time of peace will be required in the event of a nuclear attack. Some activities will assume greater importance, and must be augmented by trained auxiliary personnel.

f. Fortunately, most of those activities and services that are not in the governmental organization exist in our society. The medical profession is the best example and incidentally will have the greatest work load.

The National Civil Defense Plan states the mission succinctly and clearly.

1. Protection of life and property by preparing for and carrying out non-military functions to prevent, minimize, repair and recover from injury and damage.

2. Mobilization and management of resources and production.

Planning for the mobilization and management of resources and production has made good progress at the national level. Planning at the county level is deficient. However, all of the utility companies have plans that are applicable for any disaster. The large industries either have plans or are now developing them.

The problem of preparation for the protection of life and property is the most difficult since the effectiveness of the program in this area requires an awareness on the part of the citizens of the need for Civil Defense and their willingness to accept their share of the responsibility for survival. This indicates a sizable task for education and training.

The National OCDM is stressing "Home Preparedness" and in consonance with the policy the major effort is now being placed on training in "Home Preparedness." A course in Basic Civil Defense of ten hours duration is being offered. At the last session of the course the "Home Preparedness" Program is introduced and the need for First Aid Training is emphasized. More than three hundred have completed this basic course and there has been a marked increase in the Red Cross First Aid Courses.

In no sense am I minimizing the magnitude and difficulties that will confront each government agency or service, for there are no "small jobs" in a disaster, unquestionably the greatest and most complex of all will be the problems confronting the doctor. This problem will be immediate and will also extend over considerable time.

From experience gained by working in several major disasters, it is my observation that more people become ill or are injured after a disaster has struck than are injured during the incident itself. Add to the usual diseases that plague a disaster area, the insidious menace of radiation born by fallout, and the potential problem is indeed formidable. The area damaged by fire and blast will be considerable and will certainly contain all the elements, plus radiation, to produce immediately inordinately large numbers of casualties followed by the spread of diseases common to disaster areas. Serious as this is, the greater danger to the most people is from radioactive fallout. Yet everyone who survives the blast can live if they will do those things that are recommended. The failure of the population to heed the warnings and instruction will increase the number of casualties and thereby place additional burden on the medical profession.

In view of the continuity of government concept, it follows then that each local government from the smallest village to the largest city must develop plans to utilize all the personnel and resources available in the event of disaster. Some governments have plans in being and others are in process of development.

Although progress is being made in developing plans by local governments, indus-

THE AUTHOR



Prior to his assignment in 1954 as Chief of the U.S. Army Military District, Oklahoma, Colonel Robert G. Johnston, USA (Retired), served in Japan as a Post Commander and was Chief of Staff, Southwestern Command. His first military service was with the Iowa National Guard in 1921. In 1935, while serving with the Civilian Conservation Corps, he was recalled to active duty. At Fort McClellan, he served as company and battalion commander and later as Regimental Executive Officer. In 1944, he organized and commanded a regiment in the Infantry Advanced Replacement Training Center at Camp Livingston and later became S-4 of the Center. From 1945-47, he served in the Philippine Islands as Assistant G-3 and was then Director of Security and Training of the Philippine Base Command. His decorations include: Legion of Merit, Commendation Ribbon, Asiatic Pacific, American Defense and Philippine Liberation and Occupation Ribbon. He was appointed Oklahoma County Director of Civil Defense in 1959.

try and organizations outside of government have made more progress, especially the utilities and large industry. The outstanding example in Oklahoma County of preparation to meet disaster has been done by the Oklahoma County Medical Society. Their Disaster Committee has written a Disaster Plan that is simple, practical and comprehensive. It has been tested and it *WORKS*. This is a splendid example of the discernment, public spiritedness and selflessness that typifies the medical profession.

It is no suprise to me that the medical profession should set an example in the preparation for disaster in Oklahoma County. During many years of military service my experience is that the doctor is always devoted and genuinely concerned about his fellowmen. Fortunately, I learned early in my career that the doctor could and would give me the advice and support needed to keep my troops in good health and effective. Always his advice or actions were based on the facts as he saw them and probable results. Both my professional and personal experiences cause me to have the deepest respect for the medical profession. An accolade to all members of your profession.

Our planning must provide for giving the doctors a chance to work and supporting them in every way possible if the survival effort is to succeed.



This 200 bed emergency hospital is assigned to Oklahoma City Civil Defense for disaster use. It is completely staffed by trained members of the Oklahoma County Medical Society under the leadership of Doctor John Hubbard. The hospital is functionally packed with perishable items stored in local hospitals on a rotating basis. This unit also serves as a training unit for 12 similar hospitals pre-positioned across the State. These hospitals are all under the control of OCDM Region 5, Denton, Texas.

The American Red Cross Role in Civil Defense

ROBERT L. ESSMAN

WITH THE approaching spring season of potential floods and tornadoes in the midwest, Civil Defense and Red Cross workers are anxious to have the public informed as to the nature of these two major disaster relief organizations, and the responsibilities each will fulfill when disaster strikes. Before proceeding, a distinction must be made between "natural disaster," one caused by natural elements of weather and fire, and including such catastrophes as train wrecks, explosions, etc., and "enemy-caused disaster," associated with war.

In a natural disaster, the Red Cross provides assistance under authority of its Congressional Charter. During the emergency immediately following a disaster, Red Cross gives food, clothing, shelter, and medical care, on a "mass care" basis. Following this relatively brief emergency period, Red Cross concentrates on helping families and individuals make their own rehabilitation plans and then providing assistance on a basis of need. This help usually takes the form of food, clothing, household furnishings, repairing and rebuilding homes, occupational

THE AUTHOR



Robert L. Essman is State Relations Representative in Oklahoma for the American National Red Cross, with headquarters at the organization's midwestern area office in St. Louis. Prior to this appointment, he was Red Cross Field Representative in Illinois. Appointed to the Red Cross National Staff in 1953 as an assistant field director, he spent two years in the Far East. On his return to the states, he joined the Disaster Service in the midwestern area office. Mr. Essman has served in many disaster stricken areas, working with individual families in dispensing Red Cross aid to victims of flood, tornado and other natural catastrophies. In addition to these disasters, he assisted in the work at Camp Kilmer, New Jersey in rehabilitating the Hungarian refugees who came to this country as a result of the uprising against communistic rule.





supplies and equipment, and medical care. Red Cross help in the last category has changed over the past several decades in proportion to improving community medical facilities throughout the country. Today Red Cross medical care consists of first aid teams, fresh supplies of blood from Red Cross regional blood centers, nursing service, and financial aid for disaster inflicted injuries. All Red Cross assistance is an outright gift with no obligation to repay.

At the very outset of a natural disaster, elements of local, state, and federal Civil Defense go into action, using CD personnel and appropriate government departments to rescue victims, protect lives, guard health and property, and restore public works.

Long standing public laws and local agreements have defined the roles of Red Cross and Civil Defense in both natural and enemy caused disaster. These agreements have created a close, cooperative working relationship, and have assured that there is no conflict or duplication of effort on the part of the two organizations.

In Oklahoma such an agreement was revised in April, 1960. This concise document stipulates that The American Red Cross will assist Civil Defense in the training of CD workers and the general public in first aid, training in home care of the sick and injured, and training nurses aides. It calls for Red Cross to make available chapter volunteers and resources for participation in CD defense activities.

During a natural disaster, the agreement provides that Red Cross will continue to carry out its traditional services, i.e., emergency "mass care" and long-range rehabilitation of families. The agreement continues:

"Government agencies shall continue to assume their normal responsibilities in the protection of lives and property, the provision of their usual community services, and the restoration of public property."

If a natural disaster is declared an emergency by the Governor, however:

"He (Governor) may delegate over-all coordination of all resources to the Civil Defense Director."

In this case, the agreement states:

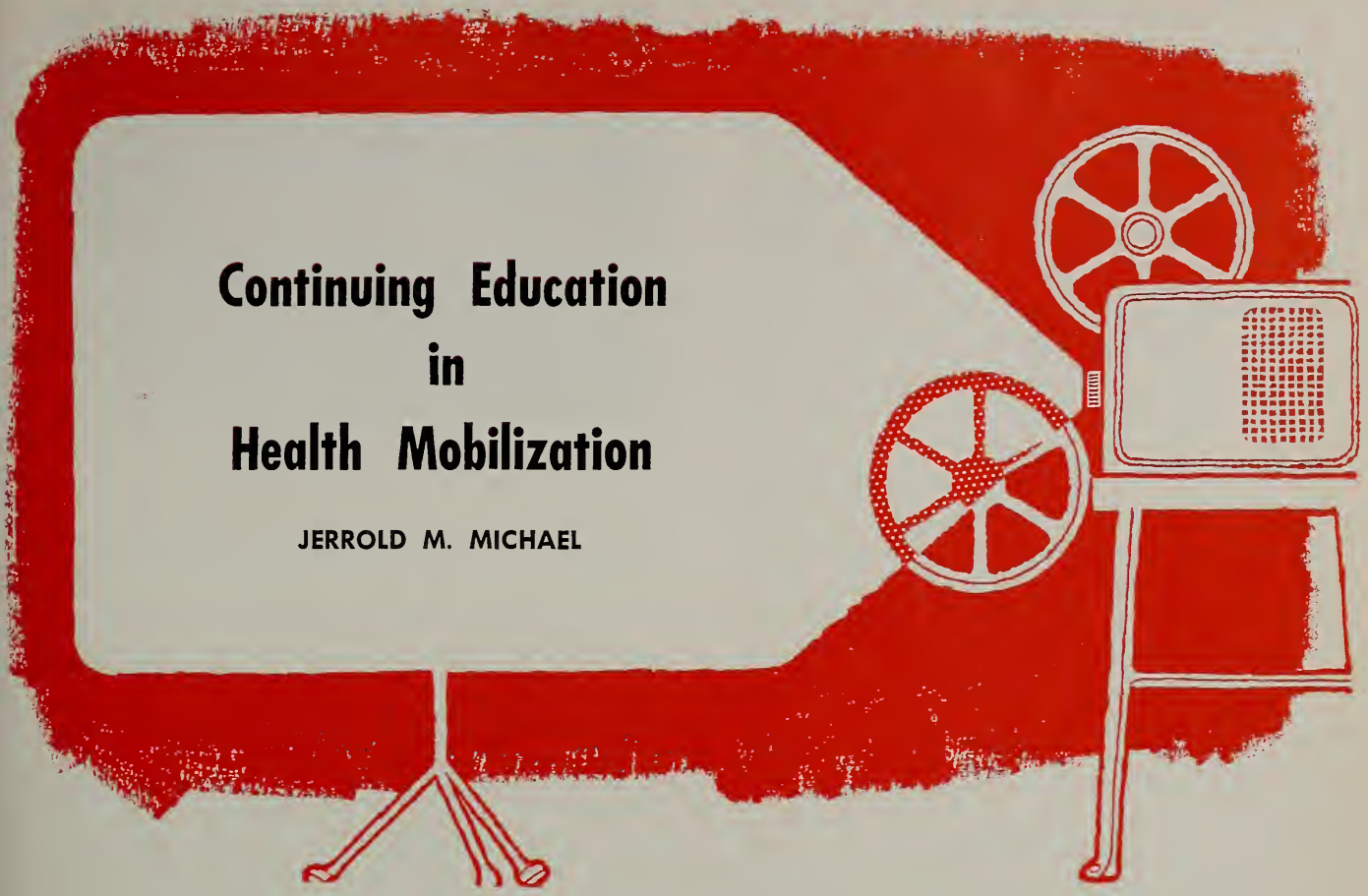
"The Red Cross will discharge its responsibility in cooperation with jurisdictional governmental authorities but will exercise administrative and financial control over its own operations."

In the event of an enemy-caused disaster, the agreement declares that Civil Defense will exercise complete control of operations and be responsible for all financial commitments. Civil Defense will utilize all State and community volunteer resources, including available Red Cross personnel and supplies, in carrying out this responsibility. All personnel taking part in such activity shall be considered Civil Defense personnel.

The effects of enemy-caused disaster are similar in many respects to those of natural disaster: large numbers of people are suddenly plunged into a state of helplessness, communications and community patterns are violently disrupted. There is an urgent need for food, clothing, shelter, and medical care. By virtue of years of experience in handling this type of situation, Red Cross can make a highly significant contribution. In coping with disaster, however, and especially in anticipation of enemy-caused disaster, recovery will demand the highest degree of training, and coordination of total resources. Swarms of spontaneous but sincere offers of help are a poor substitute for trained volunteers carrying out a pre-conceived disaster plan. In event of enemy attack, anything short of this could mean the extinction of our country.

Continuing Education in Health Mobilization

JERROLD M. MICHAEL



Introduction

THE MOBILIZATION of our country's health resources is a tremendous task. One of the major elements of this task is training. Under assignment by the Office of Civil and Defense Mobilization, the Department of Health, Education, and Welfare has the responsibility for planning and guidance in Emergency Health Services for civilians. In the field of training, three program areas are involved:

1. Training health manpower in professional and technical content of health mobilization.

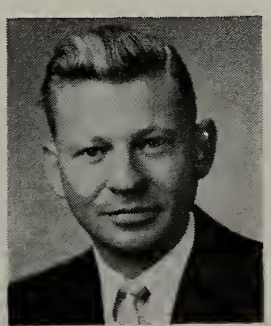
2. Developing health education materials for inclusion in curriculums of schools and colleges, ongoing training programs, special training programs, and professional schools.

3. Developing health mobilization information for voluntary agencies, professional groups, and the public.

The Goal

The goal to which our health mobilization effort is directed is for the population surviving a national disaster to be able to meet its health needs with resources at hand. Training is a vital, and perhaps the most vital, segment of that effort.

THE AUTHOR



Jerrold Mark Michael, chief of the Public Health Service training branch, division of health mobilization, is a senior sanitary engineer. He received his Bachelor of Civil Engineering in 1949 from George Washington University, and Master degrees from Johns Hopkins and the University of California. Mr. Michael served with the Public Health Department of Phoenix, Arizona prior to joining the U.S. Public Health Service as a training consultant with the communicable disease center in Atlanta.

Training Objectives

There are two major objectives in our training plans. The first is the development of methodology by which every individual in our country may be trained to meet his own health needs, either through self-help or neighbor-help in the event of a national disaster.

The second objective is to develop capabilities of the community to meet its own health needs, using its own resources in the event of a national disaster. To this end, the health professions including physicians, dentists, veterinarians, nurses, sanitary engineers, pharmacists, technicians, and others may require training in order for them to be able to assume responsibility and function in health and medical areas beyond those in which they normally function in peacetime. For instance, post-attack the clinician may have greater responsibilities in community health, while the nurse may have to assume greater responsibility in medical care.

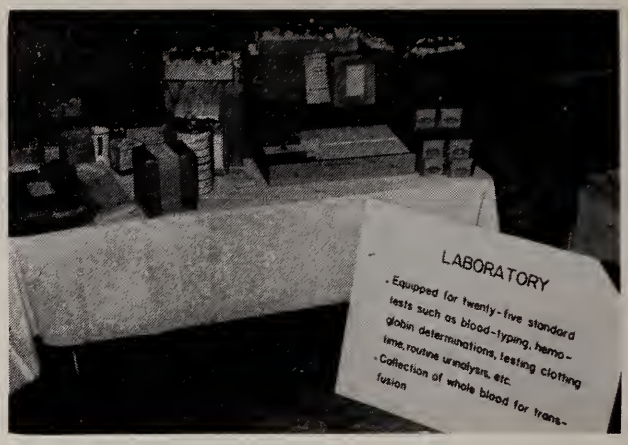
However, to be most effective, specific training should be related to the post-attack organization for health operations.

The Three-Step Approach

Three basic steps are required to get the training to the *community* and the *individual.*

First of all, the Public Health Service itself, required continued inservice training to become oriented to the needs of the community for emergency health services. This includes not only the philosophy of the health aspects of civil defense, but also for some, the technical details of program responsibilities. As an example, Public Health Service staff members need to become expert not only in the content and layout of the 200-bed Civil Defense Emergency Hospital, but also in the most efficient methods of instructing others in its setup and operation. Step one, therefore, is the development and maintenance of a capability of the Public Health Service itself.

Step two is to make use of the commissioned reserve officers of the Public Health Service as well as other selected health personnel to form a cadre that can, among other



duties, assist in community planning and training.

By training this cadre, a corps of knowledgeable health workers is developed who can be called upon to assist a local community with the conduct of instruction courses as well as operational programs. The training of this cadre group accomplishes two purposes. It establishes a group of professional health workers who can accept additional health-related responsibilities in the event of a national disaster, and it provides a cadre of trainers who can be called upon to pass this specialized knowledge to professional organizations and the lay public.

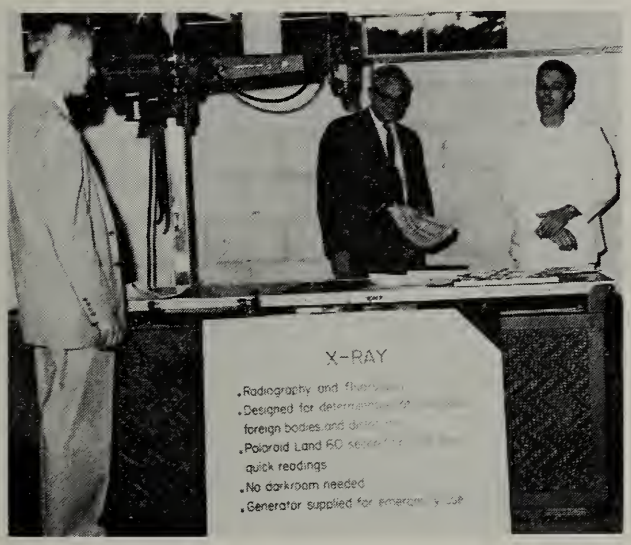
The third step in the program of education and training involves local professional groups, State and local governmental agencies, and through them, the general population, through the development and distribution of training materials and programs.



First Phase of the Training Program

The first phase of the training program in health mobilization was initiated with the presentation of three baseline training courses in April, May, and June of 1960. A total of over three hundred health services personnel participated in these courses entitled, "Health Services Aspects of Health Mobilization," in Brooklyn, New York; Battle Creek, Michigan; and Alameda, California. The professional disciplines represented included physicians, dentists, veterinarians, nurses, pharmacists, sanitary engineers, sanitarians, and other health services personnel.

The training manual developed for these courses covers such topics as "expanded function" medical care by allied medical personnel, instruction techniques designed to



equip students with the tools and methods of teaching community health services such as epidemiology of disaster; communicable disease control measures; emergency water supply and wastes disposal; and radiologic, chemical, and biologic protection including survey techniques, hazards, and therapy.

It was anticipated that those who attended these courses would take back to their communities the knowledge they gained and the enthusiasm engendered. We see in them valuable instruments of assistance to the national defense effort.

Second Year of Activity

During this second year of activity of the Division of Health Mobilization, we will continue to offer this baseline training course on a nationwide basis as well as on a state level basis in as many states as money will permit. State level presentations will be made through our staff and facilities at the Communicable Disease Center of the Publice Health Service in Atlanta, Georgia.

The Division of Health Mobilization Training Branch is currently developing four courses scheduled for Fiscal Year 1961. The first of these is a specialty course for hospital administrators; the second is for registered nurses; the third, for environmental health personnel, and the fourth course is a repetition of the basic health mobilization training for physicians and related health professions which was introduced last April, May and June. All of these courses are intended for individuals in administrative, supervisory, consultant or teaching positions, since these are the groups that are most likely to be or to become, involved in planning or developing further health mobilization programs, or in teaching or giving consultation or assistance in similar training, in the future, to state or local groups.

All of these courses will cover basic civil defense concepts, current information on biologic, chemical, and radiologic warfare, and community disaster planning. Emergency services training will include the setup and operation of a Civil Defense Emergency Hospital, treatment of water to make it safe for use, decontamination of food, mass casualty care, and medical self help.

There are no tuition fees for students, lodging is provided at a nominal cost, and approximately one-half the necessary travel expenses can be reimbursed through OCDM student training expense funds. Enrollments are limited to permit proper student-faculty ratios. Applications are to be made through State Civil Defense Directors.

By offering these specialty courses on a national level with participation by many national leaders in their fields, it is hoped that capability for producing similar courses at the state and community level will be developed.

Concurrent with the development of courses is the development of training tools.

Training manuals and audio-visual aids are important tools currently in the developmental state. These guides for training will cover the areas previously mentioned.

Moulages, manikins, and models are being acquired and developed in order to provide training devices necessary to bridge the gap between classroom instruction and field experience.

Finally, a wide selection of lecture materials is being developed to help support regional and local level training and orientation sessions.

State level training programs resulting from our initial baseline presentations are also being scheduled. The first two of these were presented by the State of Virginia in Charlottesville, November 9-11, and by the State of Kentucky in Frankfort, Kentucky, January 24-26, 1961. Others are to be scheduled in West Virginia, Delaware, Georgia and Idaho in the near future.

You will recall that the first objective in training was the development of methods to train the individual to meet his own health needs. Toward this end, the Medical Self-Help Training Section of the Training Branch, Division of Health Mobilization, has been set up in Atlanta, Georgia. This section is busily engaged in developing the means to provide every citizen in the United States with the necessary information for individual and family survival in nuclear war or natural disaster. The results of their studies will be available in July of this year.

Summary

In summary, the training goal of the Public Health Service in the field of health and medical aspects of civil defense is the development and implementation of a training and education program which will complement the health services operational activities and thus permit fulfillment of assigned emergency health services responsibilities.

Health Mobilization Courses which have been held during the Fiscal Year 1961 are:

1. Health Mobilization Program for Emergency Hospital Management, December 4-9, 1960, OCDM Eastern Instructor Training Center, Brooklyn, New York. (This course carried professional endorsement of the American Hospital Association.)

2. Nursing Aspects of Health Mobilization, April 23-28, 1961, OCDM Staff College, Battle Creek, Michigan.

3. Environmental Health Aspects of Health Mobilization, April 23-28, 1961, Battle Creek, Michigan.

4. Health Services Aspects of Health Mobilization, May 7-12, 1961, OCDM Eastern Instructor Training Center, Brooklyn, New York.

Further information on training courses and other Health Mobilization activities may be obtained from State Health Departments or Civil Defense Offices; from Regional Offices of either the Department of Health, Education, and Welfare or the Office of Civil and Defense Mobilization; or from the Division of Health Mobilization Headquarters in Washington, D.C.

Preparation for meeting the emergency health needs of the Nation obviously requires extensive concentrated activity by every individual and every organization concerned with the welfare of the Nation.

Removing Radioactive Contaminants from Water

The Sanitary Engineering Branch of the U.S. Army Engineer Research and Development Laboratories reports favorable results in tests of three methods for removing radioactive contaminants from drinking water supplies. The equipment for the tests consisted of a standard purification unit known as an Erdlator, a mobile ion exchange unit, and an electrodialysis demineralization process. The experiment was conducted at the Nevada Test Site, with the Office of Civil and Defense Mobilization participating. (Army Information Digest, February, 1961)

Medical Education for National Defense



JAMES P. DEWAR, M.D.
L. V. SCOTT, Sc.D.

THE MEDICAL EDUCATION for National Defense Program, commonly called MEND, began in the fall of 1952, as an experiment in education in the colleges of medicine at Cornell, Buffalo, Illinois, Vanderbilt, and California (San Francisco) Universities. By 1961 it had been extended to include 82 of the 87 colleges of medicine in the country. The University of Oklahoma joined the program on January 1, 1958.

The aim was to improve and extend the teaching of military and disaster medicine in the undergraduate medical schools. This aim was to be accomplished by demonstrating the application of the principles of medicine and surgery to military and disaster situations, and by giving faculty members an opportunity to learn of current work conducted in their particular fields by the various Federal services.

The MEND program is a function of the MEND Program Sub-committee of the Association of American Medical Colleges in cooperation with certain Federal agencies. These governmental agencies include the Department of Defense (U.S. Army, the U.S. Navy and the U.S. Air Force), the U.S. Public Health Service and the Office of Civil and Defense Mobilization. The policy of this program as outlined b ythe above agencies consists only of general guidlines, however, and does not attempt to prescribe a standard MEND curriculum for any of the participating schools, resulting in some variation.

On a national level the program is administered by Capt. Bennett A. Avery, M.C., USN, as National Coordinator, and Mr. Ralph Hirsch as Administrative Assistant. On a local level the program is administered by a Coordinator and an Associate Coordinator appointed by the Dean of the Medical School. They are in touch with the office of the National Coordinator, which is located in Washington, D.C., and can draw on it for such advice and assistance as may be needed. The program in the various schools is implemented by funds received from the Federal Government, and administered through the Office of Naval Research.

During the present crisis which has hung over us for the past decade or more, as a threat to our very existence, it was determined that the mission of the ROTC program in medical schools, for many reasons, was not being fulfilled. And yet, in a broader sense, a new program to integrate or incorporate the principles of military medicine into the undergraduate medical curriculum was needed. Hence the MEND program was formulated and put into action. The spread, from the original five medical schools in 1952, to 82 such schools in 1961, testifies in

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THE AUTHOR

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itself to its success. But what are the reasons for its success? The reasons for this success lie in the objectives and the manner in which these objectives are reached. Primarily, all personnel, especially medical students and the younger physicians, must be made aware of the grave dangers facing this country not only from potential enemies abroad but from civil disaster at home. The impact of these possible disasters on communities, large and small, must be fully appreciated. Surely the medical profession must be in a position to take the lead to minimize suffering and death. The objectives are accomplished by integrating into the medical school curriculum, in accordance with the philosophy of the individual university, certain principles in military medicine which are learned at symposia. The National MEND Office allows complete freedom in the manner in which this is accomplished. Most schools do not have a single course or group of courses which can be identified with MEND. Rather, they attempt to infuse into the regular curriculum, both pre-clinical and clinical, the relevant experience from military and disaster medicine. In this fashion, problems of "submarine medicine" or "acceleration" may be studied in a course in physiology; "toxic effects of rocket fuel" may be considered in a course in pharmacology; "war wounds" may be among those dealt with in a course in surgery; and so on. Similarly, the formation disaster plan in a teaching hospital of a medical school can be expected to benefit greatly from the Army's experience in the "management of mass casualties."

At the University of Oklahoma this is done by inserting pertinent information into the present curriculum without altering or changing the curriculum in any way. New material is merely integrated into existing courses by the Medical School Faculty. As an example, a lecturer on the Pathologic Changes in Irradiation Damage would stress the hazards and effects of "fall out" to the relative doses of irradiation which produce damage or death in addition to the findings in such an injury.

Since the philosophy of the MEND program is one of education, instruction of the faculty becomes perhaps the most important aim. Symposia, generally four or five a year, are sponsored by one or more of the various branches of the armed forces or governmental agencies named above. All faculty members are urged to participate. These symposia cover a wide range of subjects varying from outer space medicine to submarine medicine and are conducted on an advanced learning or faculty level. By attendance, each faculty member is made aware of modern military medical and surgical advancements. Faculty participation in this phase is perhaps the most important aspect. However, the latitude of the program is wide enough so that faculty members can be sent to other meetings or seminars which deal primarily with subjects important to the national safety such as trauma, burns, epidemiology of infectious diseases, and biologic and chemical warfare. In addition, guest speakers are brought to the School of Medicine in Oklahoma City, where the faculty and students alike can attend the lectures. Attempts are made not only to bring well known authorities to a combined student and faculty group, but also to the various departments. The MEND program is implemented in many other ways such as the distribution of scientific pamphlets and books, the purchasing of pertinent library books, and weekly movies on MEND and related subjects.

In summary the MEND program has, as its name implies, education at its very core. It attempts to familiarize the medical student with the current problems facing the nation and to prepare him for more effective military service. His mind is oriented to the necessity of triage, evacuation and medical care of the injured in mass casualties. During this time he must be prepared for any upgrading of personnel due to shortage. The purpose is not to make military officers but to make recent advances available to students so that when the young doctor is called into the armed forces the development of young officers is made easier. MEND is neither a recruiting agency nor a manpower pool, but an educational program which will better fit the young physician to assume his position of responsibility as a citizen. This program is accomplished best by integrating pertient information into the teaching material of the medical student curriculum.

Triage or Sorting of Casualties

JOE M. PARKER, M.D.

Joe M. Parker, M.D., graduated from Washington University School of Medicine in 1938. In addition to his private practice, he is Associate Professor of Surgery at the University of Oklahoma School of Medicine.

Doctor Parker served with the U.S. Army Medical Corps from 1942 to 1946 in Africa, Sicily, Italy, France and Germany.

He is a member of the Southwestern Surgical Congress, the American Board of Surgery and the American College of Surgeons.

Definition of Triage

FOR THE PURPOSE of this *Journal,* triage is that dynamic and continuing medical process of classifying the sick and injured according to the urgency and types of injuries presented, in order that each casualty may receive optimum treatment and care in the best staffed and equipped treatment facility available, within the optimum time and in favorable condition, to the end that the greatest good can be rendered to the greatest number in the shortest time with the means available.

The most highly qualified physicians available in disaster and support areas should be employed in the triage of casualties and the most competent medical specialists available should prescribe the treatment for those casualties whose injuries fall within their respective fields. Triage must be a continuing function throughout all medical installations and facilities treating the casualties which result from a mass attack.

Insofar as priority of treatment, evacuation, hospital admission, and out-patient care are concerned, all sick, injured, and wounded personnel in disaster and supporting areas, whether physically or mentally incapacitated or suffering from acute or chronic conditions, may be classified into four treatment priorities.

Definition of Priorities

PRIORITY I: Those requiring out-patient care only.

Examples of Priority I casualties would be those that have:

(a) Small lacerations or contusions.

(b) Simple fractures of small bones.

(c) Second degree burns of less than 10% extent.

(d) Short term whole body ionizing radiation doses of minor degree.

(e) Moderate neuropsychiatric disorders.

PRIORITY II: Those moderately injured or ill whose chances of recovery are good following immediate definitive treatment.

Examples of Priority II casualties are those who have:

(a) Hemorrhage from easily accessible site.

(b) Rapidly correctable mechanical respiratory defects.

(c) Severe crushing wounds of the extremities.

(d) Incomplete amputations.

(e) Severe burns of the face and upper respiratory tract necessitating tracheotomy.

PRIORITY III: Those injured and ill whose chances of recovery are not jeopardized by delayed definitive treatment.

Examples of Priority III casualties are:

(a) Simple fractures of major bones.

(b) Moderate lacerations without extensive bleeding.

(c) Second degree burns of 10 to 40% and third degree burns of 10 to 30% of the body surface.

(d) Non-critical central nervous system injuries.

PRIORITY IV: Those critically injured or ill who require extensive, complicated, time or material consuming procedures, and those who are beyond medical help.

Expectant therapy is used for those with:

(a) Critical injuries of the central nervous system or respiratory system.

(b) Penetrating or perforating abdominal wounds.

(c) Multiple severe injuries which are critical in nature.

(d) Severe burns of large areas including 40% or more of the body surface.

(e) Established lethal or supra-lethal doses of total body radiation.

Objectives of Triage

The objectives of triage under mass casualty conditions are:

1. Ensure that at the earliest possible moment, maximum number of casualties are restored to a state of mental and physical health that will enable them to fulfill an effective role in the recovery effort of the nation.

2. Ensure appropriate care for each casualty in accordance with the established priorities and within the available resources.

3. Ensure maximum use of available medical facilities and resources.

4. Ensure an even flow of casualties through the evacuation chain into proper treatment facilities.

5. Ensure that only casualties in need of professional care receive it.

6. Ensure that casualties who, after treatment of minor conditions will be able to participate in recovery efforts, are given a high treatment priority classification.

7. Ensure that casualties whose conditions are such that immediate treatment is necessary and successful recovery is likely without the use of inordinate amounts of time, equipment, supplies and personnel, are given a high treatment priority classification.

8. Ensure that casualties whose conditions are such that, following emergency care, their definitive treatment may be delayed without detriment, are given a high treatment priority classification initially and a lower classification subsequent to the emergency treatment.

9. Ensure that casualties whose conditions are such that recovery is unlikely or that inordinate amounts of time, equipment, supplies, and personnel will be required in their treatment, to the detriment of others, are given a low treatment priority classification.

10. Decrease morbidity and mortality.

Considerations in Triage Operations

Since effective triage is the key to optimum use of available medical and evacuation resources, each physician sorting casualties, in addition to being highly competent and well-trained in his field, must demonstrate mature judgment, be capable of quick and sound decisions, and possess knowledge of and give consideration to the following factors when determining priority of treatment, evacuation, and destination of mass casualties:

a. Mass casualty treatment priorities.

b. Expected number of casualties by treatment priorities.

c. Capacity, capabilities and census of his own installation.

d. Capacities, capabilities, census and locations of other installations.

e. Surgical back-logs at his own, adjacent and supporting medical installations.

f. Type and length of treatment procedure each casualty requires, amount and length of post-operative treatment likely to be required, and the chances of recovery each casualty possesses.

g. Effect of delayed treatment on each casualty.

h. Effect on other casualties, of treatment or evacuation of a casualty.

i. The status of the supplies and equipment at his own, adjacent and supporting installations.

j. Types and availability of evacuation vehicles.

k. Evacuation times, by type of vehicle, and condition of routes between his own and medical installations.

l. Effect on supporting installations of evacuating casualties thereto.

m. Malingeres.

Results of Triage Failure

Failure of triage, or inadequate sorting results in:

a. Waste of time, medical personnel, supplies, equipment, and evacuation vehicles.

b. Accomplishment of less good to fewer casualties.

c. Delayed treatment for those in need thereof.

d. Increased disability.

e. Prolonged convalescence.

f. Greater morbidity and mortality.

g. Overloading of one, several, or all, medical facilities.

h. Underloading of one, several, or all medical facilities.

i. Over or under use of evacuation vehicles.

j. Loss of needed manpower.

k. Lowered morale among medical and health personnel, as well as patients.

Summary

Triage implies the evaluation and classification of casualties for purposes of treatment and evacuation. It is based on the principle of accomplishing the greatest good for the greatest number of wounded and injured, at the particular time, within the means available. Triage requires the best efforts of an experienced physician who knows people, diseases, treatments, prognoses, and the logistics of medical care. Triage is absolutely essential if the physician is to function with mass casualties, where there might be tremendous discrepancy between the number of patients on the one hand, and the number of physicians and the austere medical supplies on the other hand.

Radiation Warning Given by Small Device

A new type of radiation protection instrument called the Personal Radiation Monitor (PRM) has been developed at Oak Ridge National Laboratory. About the size of a fountain pen and weighing only 3½ ounces, the device emits a warning tone and flashes a small light in the presence of a gamma radiation field. Scientists say its present greatest value would be immediate warning in the event of a radiation accident. (Washington Star, December 13, 1960)

itself to its success. But what are the reasons for its success? The reasons for this success lie in the objectives and the manner in which these objectives are reached. Primarily, all personnel, especially medical students and the younger physicians, must be made aware of the grave dangers facing this country not only from potential enemies abroad but from civil disaster at home. The impact of these possible disasters on communities, large and small, must be fully appreciated. Surely the medical profession must be in a position to take the lead to minimize suffering and death. The objectives are accomplished by integrating into the medical school curriculum, in accordance with the philosophy of the individual university, certain principles in military medicine which are learned at symposia. The National MEND Office allows complete freedom in the manner in which this is accomplished. Most schools do not have a single course or group of courses which can be identified with MEND. Rather, they attempt to infuse into the regular curriculum, both pre-clinical and clinical, the relevant experience from military and disaster medicine. In this fashion, problems of "submarine medicine" or "acceleration" may be studied in a course in physiology; "toxic effects of rocket fuel" may be considered in a course in pharmacology; "war wounds" may be among those dealt with in a course in surgery; and so on. Similarly, the formation disaster plan in a teaching hospital of a medical school can be expected to benefit greatly from the Army's experience in the "management of mass casualties."

At the University of Oklahoma this is done by inserting pertinent information into the present curriculum without altering or changing the curriculum in any way. New material is merely integrated into existing courses by the Medical School Faculty. As an example, a lecturer on the Pathologic Changes in Irradiation Damage would stress the hazards and effects of "fall out" to the relative doses of irradiation which produce damage or death in addition to the findings in such an injury.

Since the philosophy of the MEND program is one of education, instruction of the faculty becomes perhaps the most important aim. Symposia, generally four or five a year, are sponsored by one or more of the various branches of the armed forces or governmental agencies named above. All faculty members are urged to participate. These symposia cover a wide range of subjects varying from outer space medicine to submarine medicine and are conducted on an advanced learning or faculty level. By attendance, each faculty member is made aware of modern military medical and surgical advancements. Faculty participation in this phase is perhaps the most important aspect. However, the latitude of the program is wide enough so that faculty members can be sent to other meetings or seminars which deal primarily with subjects important to the national safety such as trauma, burns, epidemiology of infectious diseases, and biologic and chemical warfare. In addition, guest speakers are brought to the School of Medicine in Oklahoma City, where the faculty and students alike can attend the lectures. Attempts are made not only to bring well known authorities to a combined student and faculty group, but also to the various departments. The MEND program is implemented in many other ways such as the distribution of scientific pamphlets and books, the purchasing of pertinent library books, and weekly movies on MEND and related subjects.

In summary the MEND program has, as its name implies, education at its very core. It attempts to familiarize the medical student with the current problems facing the nation and to prepare him for more effective military service. His mind is oriented to the necessity of triage, evacuation and medical care of the injured in mass casualties. During this time he must be prepared for any upgrading of personnel due to shortage. The purpose is not to make military officers but to make recent advances available to students so that when the young doctor is called into the armed forces the development of young officers is made easier. MEND is neither a recruiting agency nor a manpower pool, but an educational program which will better fit the young physician to assume his position of responsibility as a citizen. This program is accomplished best by integrating pertient information into the teaching material of the medical student curriculum.

Triage or Sorting of Casualties

JOE M. PARKER, M.D.

Joe M. Parker, M.D., graduated from Washington University School of Medicine in 1938. In addition to his private practice, he is Associate Professor of Surgery at the University of Oklahoma School of Medicine.

Doctor Parker served with the U.S. Army Medical Corps from 1942 to 1946 in Africa, Sicily, Italy, France and Germany.

He is a member of the Southwestern Surgical Congress, the American Board of Surgery and the American College of Surgeons.

Definition of Triage

FOR THE PURPOSE of this *Journal,* triage is that dynamic and continuing medical process of classifying the sick and injured according to the urgency and types of injuries presented, in order that each casualty may receive optimum treatment and care in the best staffed and equipped treatment facility available, within the optimum time and in favorable condition, to the end that the greatest good can be rendered to the greatest number in the shortest time with the means available.

The most highly qualified physicians available in disaster and support areas should be employed in the triage of casualties and the most competent medical specialists available should prescribe the treatment for those casualties whose injuries fall within their respective fields. Triage must be a continuing function throughout all medical installations and facilities treating the casualties which result from a mass attack.

Insofar as priority of treatment, evacuation, hospital admission, and out-patient care are concerned, all sick, injured, and wounded personnel in disaster and supporting areas, whether physically or mentally incapacitated or suffering from acute or chronic conditions, may be classified into four treatment priorities.

Definition of Priorities

PRIORITY I: Those requiring out-patient care only.

Examples of Priority I casualties would be those that have:

(a) Small lacerations or contusions.

(b) Simple fractures of small bones.

(c) Second degree burns of less than 10% extent.

(d) Short term whole body ionizing radiation doses of minor degree.

(e) Moderate neuropsychiatric disorders.

PRIORITY II: Those moderately injured or ill whose chances of recovery are good following immediate definitive treatment.

Examples of Priority II casualties are those who have:

(a) Hemorrhage from easily accessible site.

(b) Rapidly correctable mechanical respiratory defects.

(c) Severe crushing wounds of the extremities.

(d) Incomplete amputations.

(e) Severe burns of the face and upper respiratory tract necessitating tracheotomy.

PRIORITY III: Those injured and ill whose chances of recovery are not jeopardized by delayed definitive treatment.

Examples of Priority III casualties are:

(a) Simple fractures of major bones.

(b) Moderate lacerations without extensive bleeding.

(c) Second degree burns of 10 to 40% and third degree burns of 10 to 30% of the body surface.

(d) Non-critical central nervous system injuries.

PRIORITY IV: Those critically injured or ill who require extensive, complicated, time or material consuming procedures, and those who are beyond medical help.

Expectant therapy is used for those with:

(a) Critical injuries of the central nervous system or respiratory system.

(b) Penetrating or perforating abdominal wounds.

(c) Multiple severe injuries which are critical in nature.

(d) Severe burns of large areas including 40% or more of the body surface.

(e) Established lethal or supra-lethal doses of total body radiation.

Objectives of Triage

The objectives of triage under mass casualty conditions are:

1. Ensure that at the earliest possible moment, maximum number of casualties are restored to a state of mental and physical health that will enable them to fulfill an effective role in the recovery effort of the nation.

2. Ensure appropriate care for each casualty in accordance with the established priorities and within the available resources.

3. Ensure maximum use of available medical facilities and resources.

4. Ensure an even flow of casualties through the evacuation chain into proper treatment facilities.

5. Ensure that only casualties in need of professional care receive it.

6. Ensure that casualties who, after treatment of minor conditions will be able to participate in recovery efforts, are given a high treatment priority classification.

7. Ensure that casualties whose conditions are such that immediate treatment is necessary and successful recovery is likely without the use of inordinate amounts of time, equipment, supplies and personnel, are given a high treatment priority classification.

8. Ensure that casualties whose conditions are such that, following emergency care, their definitive treatment may be delayed without detriment, are given a high treatment priority classification initially and a lower classification subsequent to the emergency treatment.

9. Ensure that casualties whose conditions are such that recovery is unlikely or that inordinate amounts of time, equipment, supplies, and personnel will be required in their treatment, to the detriment of others, are given a low treatment priority classification.

10. Decrease morbidity and mortality.

Considerations in Triage Operations

Since effective triage is the key to optimum use of available medical and evacuation resources, each physician sorting casualties, in addition to being highly competent and well-trained in his field, must demonstrate mature judgment, be capable of quick and sound decisions, and possess knowledge of and give consideration to the following factors when determining priority of treatment, evacuation, and destination of mass casualties:

a. Mass casualty treatment priorities.

b. Expected number of casualties by treatment priorities.

c. Capacity, capabilities and census of his own installation.

d. Capacities, capabilities, census and locations of other installations.

e. Surgical back-logs at his own, adjacent and supporting medical installations.

f. Type and length of treatment procedure each casualty requires, amount and length of post-operative treatment likely to be required, and the chances of recovery each casualty possesses.

g. Effect of delayed treatment on each casualty.

h. Effect on other casualties, of treatment or evacuation of a casualty.

i. The status of the supplies and equipment at his own, adjacent and supporting installations.

j. Types and availability of evacuation vehicles.

k. Evacuation times, by type of vehicle, and condition of routes between his own and medical installations.

l. Effect on supporting installations of evacuating casualties thereto.

m. Malingeres.

Results of Triage Failure

Failure of triage, or inadequate sorting results in:

a. Waste of time, medical personnel, supplies, equipment, and evacuation vehicles.

b. Accomplishment of less good to fewer casualties.

c. Delayed treatment for those in need thereof.

d. Increased disability.

e. Prolonged convalescence.

f. Greater morbidity and mortality.

g. Overloading of one, several, or all, medical facilities.

h. Underloading of one, several, or all medical facilities.

i. Over or under use of evacuation vehicles.

j. Loss of needed manpower.

k. Lowered morale among medical and health personnel, as well as patients.

Summary

Triage implies the evaluation and classification of casualties for purposes of treatment and evacuation. It is based on the principle of accomplishing the greatest good for the greatest number of wounded and injured, at the particular time, within the means available. Triage requires the best efforts of an experienced physician who knows people, diseases, treatments, prognoses, and the logistics of medical care. Triage is absolutely essential if the physician is to function with mass casualties, where there might be tremendous discrepancy between the number of patients on the one hand, and the number of physicians and the austere medical supplies on the other hand.

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Burns in Atomic Disaster

Outline of Current Plan For Emergency Treatment

VANCE A. BRADFORD, M.D., F.A.C.S.

Vance A. Bradford, M.D., is Associate Professor of Surgery at the University of Oklahoma School of Medicine, where he graduated in 1938. A Fellow of the American College of Surgeons, Doctor Bradford is also a member of the Southwestern Surgical Congress and the Oklahoma City Surgical Society.

During World War II, Doctor Bradford served as Assistant Chief and Chief of the Section at the Burn and Plastic Surgery Center of the 158th General Hospital in England.

THERMAL RADIATION travels at the speed of light in a straight line radially from the source. Beyond the perimeter of lethal range, it produces flash burns.

Initial ionizing radiation increases in radius by a factor of only 5, between a 1-kiloton and a 20-megaton explosion. Blast effect increases by a factor of 27. However, thermal radiation sufficient to cause burns, increases by a factor of 64 or from a radius of 0.5 mile to 32 miles.

Thus, it is estimated that of the injured survivors of nuclear disaster, 60% or more will be burned. There were 70,000 people burned at Hiroshima, of which 40,000 required treatment.

Burns will be largely of two types:

1. Flash Burns (40%-50% of burns). Instantaneous and on body surfaces facing the source of heat. Most of them will be second degree in depth. Many of the burned will have associated injuries from the blast.
2. Flame Burns (20% of burns). Resulting from clothing ignited by thermal radiation or from burning structures of environment.

How does one start with a sudden patient load of 5,000, 10,000, or more burns? Most of them will be civilians. Their treatment is clearly the responsibility of the medical profession. Extensive research has for several years delved into this mass casualty problem, and into concrete plans toward meeting it. This outline is intended to be a compilation of currently accepted plans for handling mass burn casualties.

Considerations in Triage

1. Effective triage is first and mandatory as the key to optimum use of available resources for the greatest number of casualties.

2. The patient load will preclude the usual individualized therapeutic latitude of which we as physicians are normally so proud.

3. Standardization for maximum salvage of human life is a necessity.

4. Thoughtful compromises and improvisions in therapy will be in order.

Sorting and Classification

An expert is preferred for this task. Here, one must rapidly inspect and estimate the area and depth of the burn and classify each casualty for treatment. Sketch the burn area on a tag with class designation, and note other injuries or respiratory burns. Three questions are decided. Which patients can survive without treatment? Which patients have little chance of living even with treatment? What is the priority relation to other injuries?

I. SELF CARE BURNS. Ambulatory patients with 15% body surface burn or a burn index of 8 or under (burn index being the sum of 0.5 point for each per cent surface of second degree burn added to 1.0 point for each per cent surface of third degree burn).

II. MODERATE BURNS. Those requiring hospitalization but not immediately threatening life. Burn index 8 to 15 or over 20% body surface. Third degree burns of hands alone are also in this class.

III. SEVERE BURNS. Burn index of 15 to 45 or second and third degree burns of 20% to 70% who are expected to be saved by vigorous therapy.

IV. OVERWHELMING BURNS. Burn index of over 45 or third degree exceeding 80%, or exceeding 50% in aged patients. Get medical consultation before assigning patients to this class.

Priority for Treatment

Shock, the immediate cause of death, may develop in a period of 4 to 24 hours, and must be prevented.

First priority for emergency treatment is for Class III, the seriously burned, where aggressive measures are expected to make the difference between life or death.

Second attention is to Class II, which needs some replacement therapy, but which could wait, if necessary.

There may be no time to treat Class IV, the designated hopeless. Class I may need little therapy. Therefore, get Classes I and IV out of the working area and concentrate effort on Classes II and III.

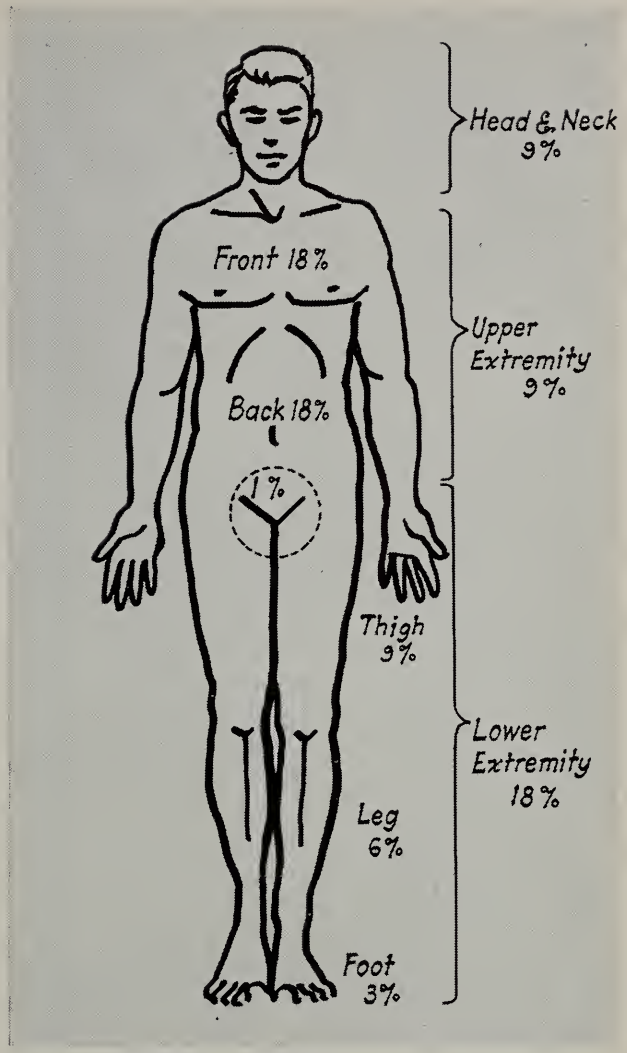


Figure 1. "Rules of 9" for computing proportion of body surface area involved in burns.

Aid Station Handling of Categories

General Measures

1. Control pain with morphine sulfate, 8 to 10 mgs. intravenously in those with impending shock, where absorption is uncertain. Give the usual hypodermic for less severe cases.

2. Protect burn wounds as much as possible from further contamination.

3. Segregate patients by classes in large rooms to save time and help.

4. Prophylactic tetanus toxoid or T.A.T. is given.

5. Remove constricting articles such as rings, bracelets, wrist watches, belts, or boots.

Class I. Reassure and supply previously prepared written instructions for self-treatment, including packets of 3 gms. of salt and 1.5 gms. of soda to be drunk in a quart solution. They are also given a 10 day supply of tetracycline tablets. Now, this large group is out of the way.

Class IV. After consultation with another physician, this category of burned patients is made comfortable with morphine for pain, and put outside the working area without treatment. Some of them may survive, and when time permits, they may be changed to Class III. Otherwise, they have the lowest priority for therapy or hospitalization.

Class II. Most of them would require some parenteral colloid and electrolyte replacement, but could survive the first several hours untreated or incompletely treated. Give oral electrolyte solution, oral antibiotics, and possibly morphine, if time permits. This group may have burned surfaces covered with dressings, while waiting for evacuation. They have second priority for transportation to a hospital or burn center.

Class III. These severely burned casualties may tolerate little by mouth, may be bordering on shock, and require immediate attention after sorting. Large one piece emergency dressings may be applied. They have first priority for transportation to full treatment.

Principles of Emergency Treatment

Early deaths are from obstructed airways or from hypovolemic shock. Therefore, systemic therapy, not local care of the burn, has precedence. If laryngeal edema is evident in any degree from head and neck or respiratory injury, do a tracheostomy. Start intravenous fluids immediately with any fluid available: plasma, dextran, dextrose in saline, or dextrose in water, in this order of preference. The mathematics of the whole amount of replacement may be computed later.

Begin prophylaxis for infection with penicillin, 400,000 units intramuscularly. If the patient is penicillin sensitive, give tetracycline, 500 mgs. every 8 hours.

With the first emergency measures under way or out of the way, begin outlining the colloid, electrolyte, and fluid replacement therapy on the basis of expected deficits.

Simple clinical signs and the urinary output must be the guides for adequacy of therapy. There is no time or facility in this situation for blood chemistry. Therefore, if possible, have indwelling bladder catheters for accuracy in measuring urine volume.

Urine Volume Control

25 cc/hr output—minimal replacement (adequate in the aged)
50 cc/hr output—good balance
75 cc/hr output—over hydration, if persisting for several hours

Parenteral Replacement Formulae
First 24 Hours Post Burn

Kg. body wt. x % burn for colloid needs
Kg. body wt. x % burn for electrolytes
2,000 cc 5% dextrose in water
Give ½ of total first 8 hours
Give ¼ second 8 hours
Give ¼ third 8 hours

Percentages of burned surfaces above 50% are figured as 50% in computing the replacement fluids. It may be dangerous to give more than 10,000 cc of fluid intravenously in a 24 hour period. It may be necessary to give colloids and electrolytes simultaneously in separate veins. Dextran is an adequate colloid for second degree burns up to 30% of body surface. Patients with considerable third degree burns should have colloids supplied by equal amounts of whole blood and dextran.

Whole Blood

Colloid	Plasma
	Plasma expanders such as dextran
Electrolytes	Sodium chloride solutions
	Ringers lactate solutions

Second 24 Hours Post Burn Schedule

Give ½ first day's estimates of colloid and electrolytes.
Give 2,000 cc 5% dextrose in water.

Third Day Plan

Give oral electrolytes, if possible in the form of a teaspoon of salt and a half teaspoon of soda in a quart of water.
Give blood as required.

After three to four days when the electrolytes are stabilized and urinary diuresis of sequestrated edema begins, the oral electrolyte solution may be stopped. Vitamins B complex and C are supplied in liberal doses. Anemia, if present, is corrected with whole blood transfusions. Protein depletion is usually marked and must be restored by the intake of several times the normal requirement.

One must be alert to complications along the way and deviate from the routines as indicated. Restrict fluids in the event of anuria. Guard the rapidity and volume of replacement fluids in the aged. Vary the estimates of injury and of therapy for infants.

After systemic treatments are well under way, attention may be given to the burn surface, locally. In the aid station, or its equivalent, little if anything specific was done to wounds. Now, do minimal debridement of loose skin and blisters, clean with soap and water, and rinse with saline.

The exposure method is suitable for one-surface burns and for burns of head, neck, and perineum. Preferably the patient should be on sterile sheets and attendants should wear masks.

Circumferential burns, which cannot be properly exposed for drying, may be dressed with dry, prepared, sterile, one piece pads, now a standard item in the army. These are special designs for dressing burns and come in sizes 18″ x 22″ and 36″ x 22″ with semi-elastic roller bandages. The outer surface is water repellent, the intermediate part of the pad is absorbent, and the burn contact surface is fine mesh gauze.

The intermediate and repairative phases of the burn treatment program are not within the scope of emergency therapy here presented. However, it is believed that barring a second attack in the same area, time would permit distribution of patients to facilities for fairly ideal programs of further treatment and rehabilitation.

Summary

1. A compilation of currently proposed plans for the emergency treatment of mass burn casualties has been outlined.

2. The emphasis is on rapid sorting and classification.

3. Only essential, life saving measures are possible during the early post burn period.

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An untechnical resume of what a physician should know about radiation effects.

A Review of the Biologic Effects of Radiation

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From 1952 to 1954, Doctor Johnson served as a First Lieutenant in the U.S. Air Force. He is a member of the Central Society for Clinical Research, the Southern Society, the American Federation for Clinical Research and the Society of Nuclear Medicine.

MANY THOUSANDS of publications have been written about the biologic effects of radiation as it pertains to man. This has been necessary because radiation effects are complex, difficult to explain and still incompletely understood. It would be desirable for every physician to have a nearly complete knowledge of the effects and problems of radiation following both therapy and accidental exposure. This is necessary because in general the public will turn to their doctor when questions arise concerning radiation. It is the purpose of this article to give a thumbnail sketch of the biologic effects of radiation as it relates to medicine. Because of its brevity, this outline will lack completeness and to a radiologist or radiohealth physicist it may seem to be incorrect and too superficial. Even so, it is my hope that it will be concise enough to offer a ready reference to the questions commonly asked about radiation.

Radiation, whether due to gamma rays, alpha particles or beta particles, produces ionization of the atoms which make up matter. During the process of ionization orbital electrons are given enough energy by the radiation to cause them to leave their orbital paths. Since the transfer of electrons makes up chemical reactions, chemical changes are brought about as a result of these ionizations. One type of chemical compounds produced by ionization in water are peroxides which can alter or destroy protein molecules. If low concentrations of peroxides are formed, they can be handled by chemical inactivators within the cell and very slight, if any damage occurs. If greater concentrations are produced these inactivators are inadequate and the peroxides are able to react with and change enzymes, genes, etc. within the cell. If high enough concentrations are produced, cell death results. The destruction of important proteins in the cell may produce no effect immediately but the cell's longevity, reproductive ability and the ability for repair are affected. If damage occurs to the germinal cells mutations may appear in succeeding generations of the organism. Up to the present there is no known way to protect tissue from radiation effect once the radiation has entered the cell. Research work in this field is very active and it is possible that compounds will be found that protect against radiation damage. At least some of the efforts to find such a substance have been directed toward compounds which will react with the peroxides produced in the cells.

Radiation exposure can be divided into acute and chronic forms. To predict radiation effects, the site of exposure must be defined as being total body radiation or radiation to a specific organ system or portion of the body. An acute exposure to 350 roentgens total body radiation will produce a 50% mortality. However, a 350 roentgens dose is commonly used in radiation therapy to a specific area with little likelihood of producing death. Radiation is a form of energy which is extremely potent as far as biological systems are concerned. Three hundred and fifty roentgens equals 3.5 calories. It can be seen then that it takes considerably more energy as heat to produce the same damage as that following radiation exposure.

Response to Radiation

The response to radiation can be divided into several categories. First, a hyperacute reaction in which the radiation doses are usually greater than 3,000 roentgens to total body radiation. These produce death within the first half hour. This death is abrupt and is due to central nervous system damage. Doses of this level are 100% fatal. After a smaller radiation exposure, 2,000-3,000 roentgens, a latent period occurs between exposure and death. In addition the onset of symptoms is less acute. The clinical symptoms of the acute reaction are: fatigue, nausea, vomiting, and diarrhea. The diarrhea usually becomes bloody and a daily increase in fever occurs. Lymphocytopenia, thymocytopenia and anemia are found in that order. A person who dies within a day or so of radiation exposure may actually die without a leukopenia. Death during the first week after exposure usually means a total body dose greater than 800 roentgens.

A subacute radiation reaction is characterized by death about six weeks after exposure. Epilation of hair occurs and an aplastic anemia is also present. Bacterial infection is largely responsible for death in these cases. As a general rule these individuals have an acute response on the day of their exposure characterized by nausea and vomiting. Following the acute reaction, there is a remission during which time the patients feel essentially well. One to two weeks later radiation epilation begins associated with malaise, fever, agranulocytosis and finally bloody diarrhea from an ulcerative gastritis or enteritis.

It is usually difficult to determine the exact radiation dosage a patient has received unless radiation monitoring equipment was near at hand. A rough rule of thumb, however, is that a patient will vomit within the first two hours after exposure if he has received over 200 r total body radiation. If he receives over 600 r he most certainly will die. If he received less than 200 r he should not experience anything but minimal nausea. If the absolute lymphocyte count is less than 800, two hours after radiation exposure, the patient has sustained a severe radiation injury. If total white blood count stays above 1800 he will probably not die. But, if the white count drops below 400 and the platelets fall within the first 48 hours, the patient will most certainly die.

Leukemia

The response is somewhat different when persons are exposed to multiple small doses whose total is equal to one sub-lethal dose of radiation. Radiation exposure of this type produces diseases which for all practical purposes are identical with many of the diseases ordinarily seen in the absence of known excess exposure to radiation. These include cancer, leukemia, heart disease and cataracts. These diseases occur in a higher incidence and at an earlier age in irradiated persons than they do in the population at large. Leukemia is a classical example of this and the effects radiation has on leukemia was demonstrated in studies of the people exposed to the atomic bomb blasts in Japan. The leukemia rate was found to be 120 cases per 100,000 in persons close to the center of the bomb blast. It was 56 per 100,000 in persons far enough away that their exposure to the acute radiation did not produce epilation. This compares to a natural incidence of about 2/100,000.

It is well established that large acute doses of radiation produce an increase in the incidence of leukemia. This increase is proportional to dose. A problem which is still unsolved though, is whether there is a threshold effect and a dosage of radiation below which an increase in leukemia is not produced. Any attempt to prove that small doses of radiation do increase the incidence

of leukemia, requires an extremely large study. For example, if the dose of radiation from birth to age 34 is increased by five roentgens the minimum patients required to determine an increase in the incidence in leukemia is 6,000,000 people. On the other hand if the dosage is 300 r a population size of 10,000 is sufficient. It has been assumed that the average dosage of radiation received by the individuals in Japan was somewhere between 50 to 200 r. Currently there is interest in whether treatment of thyrotoxicosis with radioactive iodine is apt to produce an increase in the incidence of leukemia. The usual therapeutic dose of radioactive iodine gives a total exposure to the bone marrow which is usually less than 12 roentgens. If this exposure were to increase the incidence of leukemia it would increase it by 1.2/100,000 patients treated. To prove this point statistically would require a treated population of over a million patients. It is of interest that calculations to date would suggest that leukemia occurring after treatment of radioactive iodine is no more frequent than that occurring naturally suggesting that the above calculation may be correct. A different situation exists, however, when a large dose of radioactive iodine is used in the treatment of thyroid carcinoma. Here 200 to 1,000 times greater exposure occurs. A population size of 10,000 patients would be necessary to prove an increase in leukemia. This is borne out by clinical experience which early noted that some of these patients treated for carcinoma of thyroid developed leukemia.

Accumulative Exposure

We, like all other living creatures, are continually exposed to a natural background radiation. This comes from natural radiation due to radioactive substances in rocks, radioactive carbon and potassium within our bodies and bombardment of the earth by cosmic radiation. It is assumed that over a 30 year period the natural background radiation exposure for each member of our population is about 4.3 roentgens. This compares with approximately three roentgens exposure from x-ray and fluoroscopy and 0.1 roentgens due to the increasing natural background as a result of atomic bomb testing. An example of a way to show that chronic radiation exposure shortens life is the study made by Shields Warren. He analyzed the age of death of some 82,000 physicians in the United States. In doing this he assumed that there was a good probability that from 1930 to 1941 when the dangers of ionizing radiation were first called to the attention of the medical profession, physicians using x-ray equipment in their practice probably exceeded the now established national permissible occupational exposure limits set up by the Atomic Energy Commission. He further believes that at least some physicians received an accumulative exposure as high as 1,000 roentgens. He found that on the average a radiologist dies 5.2 years earlier than do other physicians. Specialists who make considerable use of x-ray in their specialty (e.g., urologists) although probably exposed somewhat less than the radiologist showed also a definite shortening of their life span but to a lesser degree. Analysis of the causes of death showed that the radiologists died earlier of coronary disease, cerebral hemorrhage, nephritis, septicemia, bronchial pneumonia and even peptic ulcer than did other physicians.

Genetic Defects

It has been estimated that a population exposure of about 60 r will increase the number of genetic defects found in the offspring of these individuals approximately two times. You would find a two times greater incidence in mental defects, epilepsy, congenital malformations, and most other known congenital defects. This degree of exposure is not likely except as a result of atomic warfare. It is now generally assumed but not yet established for low dose that all radiation will produce some damage to the human population. This damage occurs and follows statistical rules. Its importance to specific individuals may range from nothing up to the immediate cause of his death. It is obvious that some radiologists lived out their expected normal life span. On the other hand, our population, and in fact all living animals, has been exposed to radiation since the beginning of time. Exposure to natural radiation over the ages must have produced at least part of the mutations which have been associated with the evolution of animal life. Natural selection gradually weeded out the defective mu-

tations and at the same time the more useful mutations which aided the animal in its survival were maintained. While a low mutation rate is useful to a specie, a sudden dramatic increase in mutation rate would prove disastrous. On the average, there are about 1,000 unfavorable mutations to each favorable mutation. Any sudden increase in rate would produce so many abnormal individuals that natural selection would not be possible since most individuals would be abnormal.

It certainly behooves all physicians to do what they can to keep the radiation exposure of our population to a minimum. Since medical x-ray exposure and medical exposure to radioisotopes is one of the major causes of radiation exposure to parts of our population, it would appear that this general area is one which should be kept to a practical minimum. It is anticipated that with the general expansion in the use of atomic power that the working population will gradually be exposed of their own volition to more radiation. The Atomic Energy Commission has the duty to see that this exposure is kept to a practical minimum. The present maximal permissible levels set up by the Atomic Energy Commission appear to be extremely conservative and it is unlikely that if these rules are followed the advent of the use of atomic energy will significantly hurt our population in the generations to come.

The medical and scientific advances which have resulted from the use of radiation and with them the improvement in our standard of living seems to more than justify the problems associated with the use of radiation in science, medicine and industry. It is necessary that we all work toward a better understanding of radiation and its dangers and that we be neither on the side of extreme conservatism which might stiffle progress or on the side of extreme radical disregard for its effects which might permanently destroy or harm the human race.

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AMA Woman's Auxiliary Members Build Fallout Shelters

Mrs. Harlan F. English, President-Elect of the Woman's Auxiliary to the American Medical Association, has set an excellent example of civil defense preparedness for other members of the organization by building a fallout shelter in her home. Mrs. English lives in Danville, Illinois.

In Cleveland, Ohio, another member of the Auxiliary concerned with the need for civil defense preparedness has initiated a crusade by designing and building her own shelter. Mrs. F. M. Freimann, Civil Defense Chairman of the Women's Auxiliary to the Academy of Medicine of Cleveland, learned about being prepared during World War II when she and her husband lived in Germany and Hungary. They moved to this country in 1951.

An article on Mrs. Freimann's shelter and civil defense activities is carried in the January, 1961 *Bulletin* of the Woman's Auxiliary to the American Medical Association.

Amateur Management of Mass Casualties

GIFFORD H. HENRY, M.D.

A 1927 graduate of the University of Illinois School of Medicine, Gifford H. Henry, M.D., was certified by the American Board of Surgery in 1940.

A Captain in the Medical Corps, U.S.N.R., Doctor Henry is the former Medical Director of the Tulsa City-County Civil Defense Administration and a member of the Tulsa County and Oklahoma State Committees for Civil Defense.

He is a member of the Southwestern Surgical Congress and the American Fracture Association.

ALTHOUGH the injuries sustained, and the problems of surgical care of casualties will be greatly intensified in any thermonuclear conflict, the basic principles of traumatic surgery are still the same. The need to understand them, accept them and practice them, is still the same.

This article points out some of the variations of ordinary surgical principles which would be applicable to a situation of great disparity between the number of casualties and the medical resources available.

Amateur Management of Mass Casualties

Practical planning for emergency treatment of mass casualties should postulate complete absence of modern hospital facilities because weapons of modern warfare might easily destroy all such buildings in a disaster area. Surviving medical personnel would have to spread themselves thinly among emergency installations. Semi-professional personnel would assume the responsibility of performing most necessary services. Many casualties would care for themselves with the help of friends and buddies. Many others would have no treatment at all.

With these austere conditions in mind it would seem feasible to outline some simple measures which could be used at aid stations by intelligent personnel who were not familiar with all the problems they might encounter.

In order to do anything at all for the sick and injured, a few supplies would have to be obtained somehow somewhere. Otherwise this presentation would be fruitless. The following presents a list of materials with which a fair job could be done although it is doubtful if all of them would be available at a single installation. A considerable amount of improvision might be required.

Minimum Equipment Needed

1. Airways—curved metal or plastic tubes to be placed into the mouth over the tongue to keep airway open for breathing.
2. Oxygen—from metal tank, to be given

by face-mask, or through a rubber tube inserted through nostril to throat.

3. Blood—in containers which are hung inverted over the litter, after which needle is introduced in vein and fluid flows through attached tube. Avoid air bubbles.

4. Plasma—dextran and fluid electrolytes —same as for blood.

5. Morphine — used intravenously, never more than ¼ grain (15 mg.) to a patient at one time, and only to control severe pain.

6. Barbiturates—used orally for restlessness, anxiety, or to promote sleep. Average doses 0.1 gm. or 100 mg. Also may be available in intravenous form with average dose for preparation as stated on ampule.

7. Surgical instruments should be boiled or otherwise rendered sterile before use.

8. Gauze dressings in various sizes, sterile.

9. Bandages of mesh gauze, or elastic, not sterile, various sizes.

10. Ether for anesthesia is dropped from punctured can on cloth or mask over nose and mouth.

11. Splints prefabricated of metal, wood or wire mesh, or improvised from any suitable material such as magazines, boards, shingles, pillow (tied around lower leg).

12. Splints of plaster of paris to be fashioned just prior to use by wetting folded strips of plaster roll and binding to the extremity while wet. They stiffen when dry. Use padding.

13. Tourniquets of ordinary rubber tubing should be wound tightly around the extremity with two turns and a knot, or clamped with an instrument after all the slack has been taken up. A blood pressure cuff can be used for this purpose with pressure maintained at 200-250 mm. of mercury. Other forms of tourniquets may be fashioned from belting or stout cloth, using stick for twisting tight. Padding is desirable.

14. Tetanus toxoid, .5 cc. subcutaneously by hypodermic injection to boost immunity if patient has been immunized previously.

15. Otherwise tetanus antitoxin given intramuscularly in doses of 1500 to 6000 units to non-sensitive individuals (after skin test), dose depending upon urgency and severity of injury.

16. Oral antibiotics usually in capsule form in doses of about 250 mg. each every six hours.

17. Intramuscular injections of antibiotics averaging about 250 mg. per dose given about every eight hours.

18. Catheters and tubing, various sizes, sterile.

19. Local anesthetic agents in bottles or ampules to be injected by hypodermic syringe and needle. Pontocaine ½% for eyes.

20. Hypodermic syringes and needles, various sizes.

21. Cotton and applicator sticks, soap, towels, alcohol.

Chest Wounds

Penetrating wounds of the chest cavity make a sucking noise when the patient breathes. If adequate surgical facilities are nearby, the wound should be inspected and cleaned, after which a big dressing is placed over it and strapped firmly to the chest wall with wide strips of adhesive tape. Immediate evacuation is required. If surgical help is not close by, debridement should be carried out, then the tissues over the opening should be closed by sutures around a large rubber indwelling tube. The distal end of the tube should then be placed in a lower receptacle of water, or attached to a rubber flutter-valve which will allow air to escape from the tube but prevent air from reentering.

Chest wounds which do not suck are cleaned and dressed, after which adhesive straps are used to immobilize the chest wall on the affected side, particularly if rib injuries are suspected.

Abdominal Wounds

Wounds of the abdomen may or may not present herniation of intestines. Washing extruded viscera with saline and replacing them in the abdomen when possible may promote more comfortable transportation to rear areas. Covering viscera with a moist saline dressing beneath a large abdominal pad is the alternative. Shock must first be modified by suitable measures. Smaller penetrating or perforating wounds also constitute a surgical emergency. If the casualty must be held a few hours, proceed with sedatives, analgesics and intravenous fluids to sustain life, basing treatment on general appearance, pulse, and blood pressure levels. Wounds of solid viscera such as liver, spleen and kidneys, might require extensive blood replacements which could not keep up with internal blood loss, and therefore judgment should be exercised in order not to waste blood prior to evacuation of the casualty.

Soft Tissue Injuries

Large lacerations of the trunk and extremities should be flushed out with saline. Sticks, stones, and loose foreign bodies should be removed with a sterile instrument. Accessible bleeders should be secured by a hemostat which may be incorporated into the dressing. Soap and water cleansing around the wound is desirable. Wounds of this kind are not usually sutured at advanced aid-posts. Sterile or clean dressings are applied in and over the wound. Bandages are wrapped in such a manner as to make moderate even pressure over the dressed wound. Pressure dressings are preferred to tourniquets.

If a tourniquet is required to prevent severe blood loss, it should be placed tightly around the extremity as distally as possible, and not disturbed until patient arrives at a surgical station.

Large face and neck lacerations should be approximated by adhesive tape, or by a few stitches to support sagging lips, eyelids, or nostrils. Large flap lacerations of the scalp can be cleaned, replaced, and held by bandages. Testes should be covered by scrotal skin or moist dressings.

Finger and hand lacerations are more easily bandaged over a splint with fingers partly flexed. Walking casualties may be dismissed after treatment. Stretcher cases may then be put aside to await delayed transportation to the rear.

Patients with enough blood loss to require replacement are furnished blood or plasma expanders, if available.

Barbiturates, orally, or morphine in small doses intravenously, are given in selected cases as required. Tetanus toxoid booster (½ cc. hypodermically) may be administered to patients who have been previously immunized. Otherwise, 1500 to 6000 units of tetanus antitoxin is given intramuscularly after negative skin sensitivity tests. These measures may be deferred for several days in most instances.

Antibiotics will be used only if in good supply and if patient remains in custody longer than six hours. Penicillin intramuscularly every 12 hours, or broad spectrum antibiotics orally every six hours should prevent early infection.

Fractures of Long Bones and Hip

Closed fractures (no external wounds) are splinted by applying any available method of immobilization. No traction is used. No circular casts are applied. Ambulatory patients are then dismissed.

Patients with lower limb fractures are held for delayed transportation.

Open or compound fractures (with external wounds exposing bone) are treated by cleansing and irrigation, after which pressure dressings are applied to control bleeding. Splints are placed in such a way as to prevent motion at the fracture points. Pain, if severe, is controlled by a suitable analgesic or sedative. One dose of any available antibiotic may be given. The patient is evacuated as soon as possible for definitive treatment at a support hospital.

Splinting may be accomplished by pillows or blankets tied with cord. They may be of metal, wood, plaster of paris, or cardboard. They should extend an adequate distance above and below the fracture. They should be padded and firm, but not tight. The patient should not be moved until fractures are splinted.

Fractures of Spine

A patient suspected of neck fracture should be placed on his back with head supported in a neutral position, after which he is made as comfortable as possible. No sedation should be used.

Fractures elsewhere in the spine are best carried in the prone position and allowed to "lie on the stomach" until evacuated. No splint is needed.

Pelvic fractures require no special position or splinting.

Eye Injuries

The injured eye should be inspected. Foreign material should be washed out with boric acid solution. Particles seen on the front of the eyeball may be removed by a wet cotton applicator. If they are imbedded tightly, drop ½ per cent pontocaine solution in the eye, cover closed lid lightly with a dressing and allow the patient to find his way to a support station. If both eyes are involved he will have to await evacuation.

Lacerating or penetrating injuries of the eyeball require light occlusive dressings and early evacuation. Pontocaine drops may be used for pain.

Eyelids are not to be sutured unless necessary to prevent drying of the eyeball. Enucleations are not done in the forward area.

Head Injuries

If a patient with an obvious scalp injury is unconscious, stop bleeding by pressure dressings and observe for changes in condition. Resuscitation may be required prior to evacuation. If there is no open skull fracture, expectant treatment is recommended unless deterioration of his condition occurs. Then evacuate as soon as possible. Keep airways open. Use oxygen if breathing is labored. Do not use morphine. Conscious patients present no acute problem.

Genito-Urinary Injuries

Control external hemorrhage as much as possible by pressure dressings over any lacerated parts. If bladder or urethra injury is suspected, an indwelling catheter is necessary. Resuscitate and evacuate promptly. Otherwise an outside opening must be made into the bladder with a tube inserted to drain urine and blood. Severe kidney injuries usually require supportive treatment followed by surgery.

Summary

1. Austere conditions are postulated in which emergency care of mass casualties is rendered by para-medical personnel and laymen working in advanced aid-posts with limited supplies.
2. A practical method of sorting casualties according to priorities of treatment and evacuation is suggested.
3. Limited emergency treatment for certain types of injuries are summarized to include essentials only.

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Civil Defense Against Chemical Warfare

MAJOR CHARLES W. DUTREAU
Army of the United States—Retired

G GAS!
A New Weapon of Chilling Terror
WE HAVE IT!—SO DOES RUSSIA!

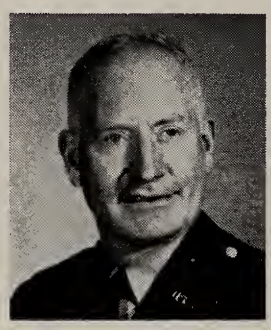
THIS CAPTION appeared on the front cover of *Collier's* Magazine dated November 27, 1953. The words were superimposed over frightened eyes staring out of weird gas masks—accurate drawings of some of our prototypes.

My first impression was that spies had stolen our classified notebooks, or possibly one of my colleagues had talked and would spend the next ten years in Leavenworth. When I had left the Army Chemical Center for a tour in Korea just 20 months before, G Gas was so hush-hush around the research laboratories that if one of us jotted down a logarithm while calculating a toxicity factor, the paper on which is was written was sealed in an envelope marked "Classified Trash" and locked in the vault until the end of the day, when it was burned in a spy-proof incinerator and the ashes pulverized.

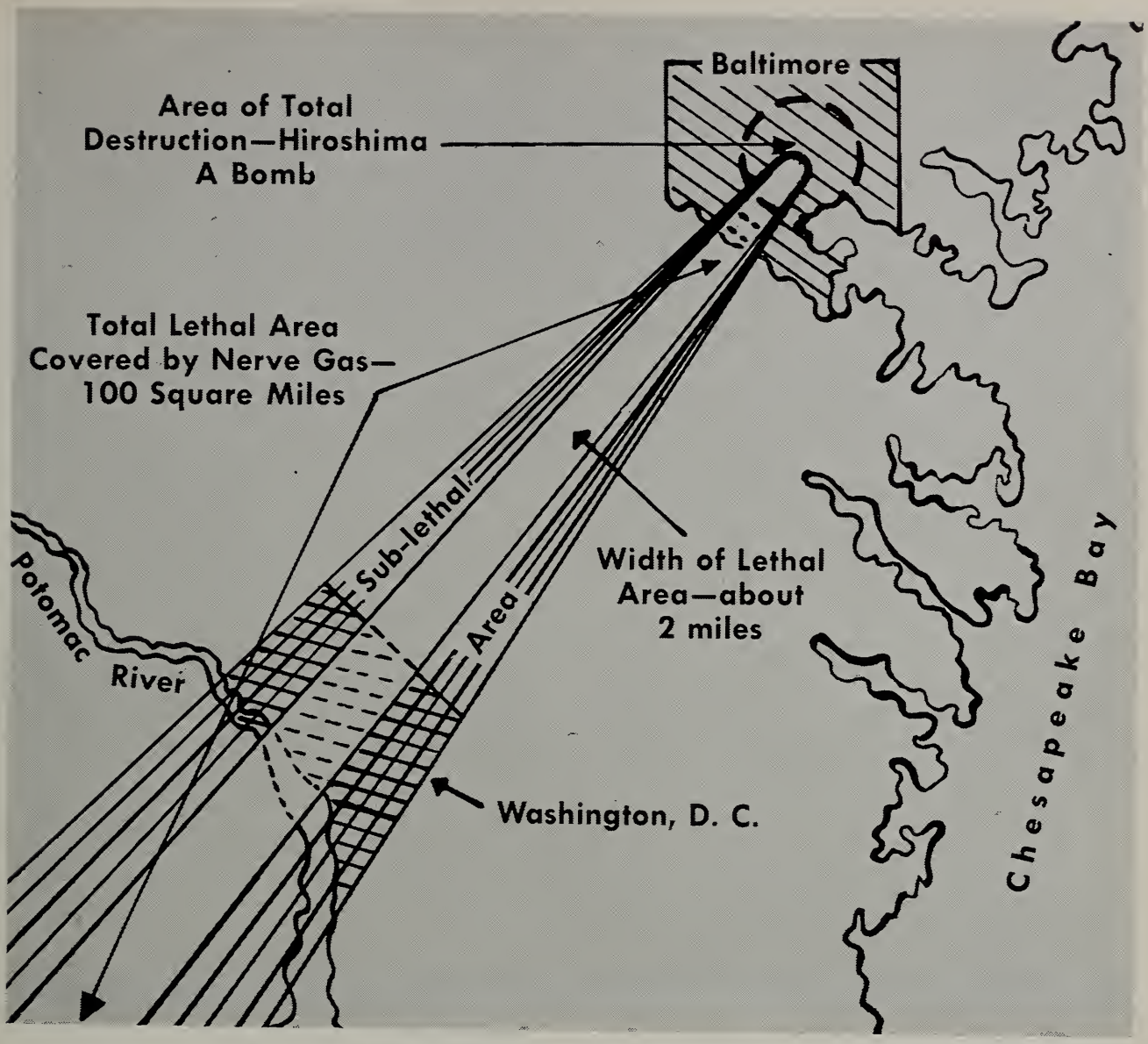
Eagerly I thumbed through the magazine and located the article. It was illustrated by three photographs of the same gas chamber in which many of my own experiments had been conducted in strictest secrecy. They showed 1) a white rat entering the chamber, 2) the same rat in convulsions and 3) the same rat, dead—all in a measured interval of 35 seconds. There were photographs of some of my colleagues, and a statement by Brigadier General William M. Creasy of the U.S. Army Chemical Corps Research and Engineering Command, which said, "Planeload for planeload, and under right conditions, GB represents as great a threat to the civilian population as the A Bomb." (GB is one of several "G" gases.)

The article went on to say that one plane could drop enough gas to kill everyone in 100 square miles. There was a sketch show-

THE AUTHOR



A native Oklahoman, Major Charles W. Dutreau attended both the University of Oklahoma and Texas College of Mines, majoring in Chemistry. During World War II, he was with the Office of Civilian Defense. He was then assigned as Research Engineer with the Army Chemical Center where he conducted early research in toxicity of nerve gases and other new chemical agents. For five years, Major Dutreau was Staff Chemical Officer at the Port of Pusan, Korea and at Fort Sill where he was technical advisor on defense against chemical, biologic and radiologic warfare. In 1960, he retired from the U.S. Army Chemical Corps School in Fort McClellan, Alabama where he was Instructor in Civil Defense. Returning to Oklahoma, Major Dutreau was appointed to his present position of Civil Defense Officer to the Oklahoma State Department of Health.



Typical area coverage from release of seven tons of nerve gas on Baltimore under ideal conditions with slow surface wind moving toward Washington, D.C. Lethal zone extends about 50 miles down-wind. (Adapted from Collier's with permission of the editor.)

ing an aircraft spraying G Gas on Baltimore, and the gas had drifted 50 miles downwind, completely covering Washington, D.C. As an afterthought, it was added that civil defense authorities estimate that a half-gallon container of this gas released in the air-conditioning system or from an aerosol-type bomb in the House of Representatives would kill everybody in the Chamber.

This article was the first comprehensive official release to the public concerning a SECRET weapon that the Germans had developed in the Thirties, and which had been widely known in Europe for many years. It had been in Russia's arsenal since 1945.

There is now much published material on the chemistry and toxicity of at least three of the most common G Gases and the symptoms, prognosis and treatment of G Gas casualties may be discussed with very few restrictions.

Historical

G Gas (G for German) first was prepared in 1937 at Elberfield, Germany by Doctor Gerhard Schrader while searching for a new chemical to kill DDT-immune insects. It was found that this new compound, which Doctor Schrader called "Tabun," killed people in much the same way that DDT killed

flies, and that it built up no immunity in man or insect. The German officials immediately recognized the chemical warfare potential of Tabun and in 1939 constructed a plant at Dyhernfurth in East Germany. By 1942 the plant was producing 1000 metric tons per month of this material. The entire operation was carried out under conditions of secrecy such that neither we nor our allies knew of this new gas until the end of the war, when we captured large quantities of Tabun stored in glass-lined bombs and containers. The Russians occupied East Germany and seized the Tabun plant along with its scientists, engineers and operating personnel, as well as huge stockpiles of the finished product. The plant, its operating personnel, and the stockpile of gas were moved to Russia.

German scientists continued their search for even more toxic chemicals and, in 1938, prepared a substance called "Sarin." In 1944 a third compound called "Soman" was developed. Plants for production of these two gases were under construction at the end of the war. The Russians captured them, also.

The three compounds differ in molecular structure but have essentially the same physiologic action in that they effect a removal of the balance between the sympathetic and parasympathetic nerve systems. For this reason, in the United States we use the general term "nerve gas" to include all chemical warfare agents of this general class. We use the code designations "GA" for Tabun, "GB" for Sarin and "GD" for Soman. Each compound has certain advantages and disadvantages as a chemical agent. The Russians have adopted GA as the standard filling for their chemical munitions because they inherited trainloads of this agent, along with the complete Tabun plant, from the Germans. We in the United States had to start from scratch, and chose GB principally because it is about four times as toxic as GA and more than 25 times as volatile at 30 degrees C.

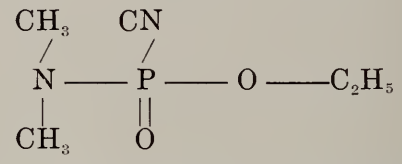
Physical Properties

In the pure state all of these compounds are clear, colorless liquids which, when volatilized, give off vapor having about five or six times the density of air. When the substance is released in the open, the vapor moves with the wind like fog, entering and remaining in low enclosed areas, basements and fallout shelters which do not have gas filters in their ventilating systems. GA and GD have very faint, fruity odors. GB has no detectable odor in the pure state.

Chemical Properties

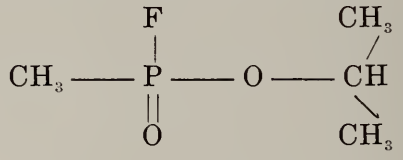
All of these agents are organic phosphorous compounds that may be considered simply as substituted phosphoric acid, phosphine oxide, or various other forms depending upon one's preference for nomenclatures.

GA has the structural formula



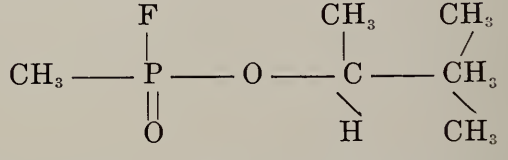
and may be thought of as cyanodimethylaminoethoxyphosphine oxide, ethyl ester of dimethylaminocyanophosphoric acid, etc.

GB has the structural formula



The official Chemical Corps name of this compound is isopropyl methylphosphonofluoridate. Some chemists like to call it fluoroisopropoxymethylphosphine oxide, while others prefer isopropyl ester of methyl fluorophosphoric acid.

The structural formula of GD is



This compound is fluoromethylpinacolyloxyphosphine oxide, pinacolyl ester of methyl fluorophosphoric acid, etc.

These compounds hydrolyze slowly in water but fairly rapidly in strong acids or alkalis.

Physiologic Action

It is generally believed that muscular contraction is implemented or stimulated by the

presence of acetylcholine in the myoneural junction. This substance seems to be formed by a chain reaction which combines choline and acetate already present in the tissue. Acetylcholine appears to be produced at the junction only when the reaction is triggered by a nerve impulse. Under normal conditions, as acetylcholine is formed it is broken down into its original components by action of a specific enzyme—cholinesterase—which also is present in the tissue. This reaction goes on in equilibrium so long as the nerve impulse continues and cholinesterase is present under normal conditions. This cholinergic action prevents the buildup of acetycholine beyond the quantity required for normal muscle stimulation.

When the nerve impulse ceases formation of acetylcholine is arrested and cholinergic action goes on to completion, the stimulus is removed and the muscle returns to its normal state of relaxation.

Nerve gas appears to react with cholinesterase in an irreversible reaction in tissue fluid permitting accumulation of acetylcholine and continual stimulation of the parasympathetic nerve system. Muscles thus continuously stimulated remain in a contractile state.

This phenomenon begins in a matter of seconds after nerve gas enters the body.

The effect of accumulation of acetylcholine in the nerve endings is seen in clinical symptoms involving the ciliary body of the eye, the iris, blood vessels, bronchial tree, gastrointestinal tract, and the urinary bladder. Voluntary muscles also are affected and become paralyzed.

Some investigators classify the pharmacologic effects of nerve gas as muscarinic, nicotinic and central, some examples of which are shown in the table below.

Nerve gas vapors are readily absorbed by the lungs. In a high concentration, a person might receive two or three times the lethal dose (LD 50) in one breath of contaminated air. A droplet of GB the size of a pinhead would be lethal if volatilized and breathed, with death probably resulting in two to five minutes. The same droplet on the skin, if totally absorbed, also would cause death—perhaps in five to ten minutes. Again, the same droplet in the eye might cause death in 30 to 45 seconds.

The actual LD 50 by percutaneous absorption under field conditions is much greater than indicated here, due to partial loss of the gas by evaporation.

In prolonged exposure to low concentrations of GA, there is very slight, but definite detoxification. In the case of GB and GD there is no measurable detoxification and effects are cumulative in a straight line.

Toxicity

By Inhalation—Dosage by inhalation is

PHARMACOLOGY OF ANTICHOLINESTERASE AGENTS[6]

Type of action	Site of Action		Response
Muscarinic	Glands: Salivary, nasal, bronchial, gastrointestinal		Increased secretions
	Smooth muscles:	Bronchial	Constriction
		Cardiovascular	Bradycardia, hypotension
		Iris	Miosis
		Gastrointestinal	Increased motility, cramps, diarrhea
Nicotinic	Ganglia		Hypertension
	Neuromuscular junction		Fasciculation, paralysis
Central	Central nerve system		Apprehension, hyperexcitability weakness, incoordination, collapse, convulsions, respiratory failure

directly proportional to the volume of inhaled air. For example, a man at rest who receives a median lethal dose in three minutes at a given concentration, would receive the same dose in one minute if engaged in strenuous exercise which increases his inhalation volume-rate three times.

The median lethal dosage by inhalation of nerve gas vapor for man at rest is about 400 mg-min/m^3 for GA, and 100 mg-min/m^3 for GB. Median incapacitating dosages are 300 and 75 mg-min/m^3 respectively. At 30 degrees C., volatility of GA is 858 mg/m^3 while that of GB is 23,000 mg/m^3.

A dose exactly lethal for the individual, received in a 30 second period causes death in 4 to 10 minutes. The same dose received in a 10-minute period produces death in 10 to 25 minutes from the time exposure began.

By Percutaneous Absorption—Nerve gas in the liquid form has very low surface tension. This property, together with its miscibility in both water and oil, enables it to penetrate the skin in a matter of seconds. However, when a droplet falls on the skin it spreads out over a wide area in a thin film only a few molecules thick, and most of it evaporates before it has time to be absorbed. High temperature increases the evaporation rate.

The LD_{50} of liquid GA by percutaneous absorption for man is estimated to be about 1 to 1.5 gm/man within the normal temperature range. The LD_{50} of liquid GB is 1.7 gm/man; greater than that of GA even though the latter is four times as toxic. This is explained by the higher vapor pressure of GB which gives it a faster evaporation rate so that it remains on the skin for a shorter period.

Nerve gas vapor is readily absorbed through the skin. The LCt_{50} of GA vapor by skin absorption has never been determined but seems to lie in the range of 20,000 to 40,000 mg-min/m^3. The LCt_{50} of GB vapor for naked man by skin absorption is 12,000 mg-min/m^3, and 15,000 mg-min/m^3 for man in ordinary combat clothing. The median incapacitating dosage from vapor on the skin is 8,000 mg-min/m^3 with ordinary clothing.

Symptoms

A minute amount of nerve gas coming in contact with the eyes produces myosis in a matter of seconds. A very low concentration in inhaled air causes immediate contraction of the bonchi with a peculiar tightness in the nose, throat and chest. This is accompanied by a strange sensation difficult to describe, which the researcher learns to recognize as a warning sign that gas is loose in the laboratory.

A person exposed to a low concentration of nerve gas in air until he has accumulated a lethal dose, experiences the following subjective symptoms:

The subject has a peculiar feeling in the eyes and notices that the lights are growing dim. White colors take on a yellow hue and he has severe pain in the eyes and temples when trying to focus on objects closer than four or five feet. He cannot read ordinary print. The pain is not noticeable when the eyes are closed.

Simultaneously, with the first breath there is a weird sensation of tightness in the nose and throat. The victim exhales before the air reaches the alveoli and tries another breath. This time the air reaches the lungs, which feel as though they are being squeezed. There is copious flow of saliva and marked nasal discharge. The victim is nervous and irritable and jerks involuntarily at any sudden noise. He is in a state of extreme mental confusion. His speech tapers off into an incoherent mumble. There are severe cramps in the abdomen and chest; his hands tremble; breathing is shallow and very rapid. A viscous, frothy exudate bubbles from the mouth and nose.

At about this point, subjective symptoms cease as the victim collapses, falls, and loses consciousness. An observer would notice that the pupils are about 1½ mm in diameter. Blood pressure falls; temperature drops and there is jerking of the head and limbs with loud chattering of the teeth. This condition soon progresses to violent convulsions followed by flaccid paralysis, asphxia, cyanosis, circulatory collapse and death.

A blood sample taken when the victim

had reached the state of mental confusion would have shown *no* RBC cholinesterase activity.

A massive dose of nerve gas by inhalation produces these symptoms almost simultaneously, except that the victim may take only one or two breaths before death—in which case there is insufficient exhalation to cause frothing at the mouth.

This poison received by ingestion or by the percutaneous route, produces the same symptoms except that myosis may be absent, particularly if the victim's eyes are protected by a good gas mask.

Treatment

Military personnel are taught to stop breathing and put on the mask immediately when warning is given or when the presence of gas is suspected. If the soldier notices subjective symptoms, he gives himself an injection from a syrette containing 2 mg. of atropine tartrate, which he carries with the mask. Speed is so essential that he does not take time to roll up a sleeve or trouser leg, but drives the needle through the clothing into the thigh and squeezes the solution into the muscle. If liquid nerve gas falls on the skin, it must be flushed off with water immediately; contaminated clothing removed, and the skin washed with soap and water or any alkaline solution.

These are the only self-aid measures available to the soldier. If the syndrome continues he may receive first aid from an aidman or another solider. In massive respiratory exposure there should be at least two trained men working on each casualty. If a victim is unconscious or in convulsions, three syrettes of atropine must be given immediately (two syrettes if one already has been self-administered—a total of 6 mg.). If there is respiratory difficulty, artificial respiration is started and continued until breathing is restored or the patient dies.

Artificial respiration is complicated by the presence of fluids in the mouth, throat and nasal passages. Fluids should be aspirated or wiped out with cloth or absorbent paper. This may be difficult, if not impossible, if the jaws are clamped tightly shut.

Under current regulations, a U.S. Army medical soldier or aidman is not permitted to administer treatment beyond the measures outlined above.

If a physician is present or the victim reaches a hospital in time for more comprehensive treatment, additional atropine may be given intravenously in 2 mg. increments until convulsions are relieved or signs of atropinization appear. These include cessation of salivation, dryness in the mouth, throat and skin, and acceleration of the pulse. The patient should be observed for effect after each injection before another is given. The effect of a 2 mg. dose of atropine begins within one minute after intravenous injection and eight minutes after intramuscular injection, and is maximal after six and 35 minutes respectively. If an iron lung is available, it may be used with such supplementary procedures as oxygen by pressure mask, periodic mouth-to-mouth insufflation in rhythm with the iron lung, etc. An oropharyngeal airway may be placed in the victim's mouth to aid in these procedures. If the patient has an upper respiratory obstruction which cannot be removed by aspiration, the physician may try to insert an endotracheal tube if the patient is relaxed and unconscious.

If these measures fail to produce an adequate airway, the physician may consider an emergency tracheotomy, and insertion of an endotracheal tube with an inflatable cuff, directly into the opening. The patient's lungs then may be inflated by forcing air through the tube by mouth or by use of a mechanical device.

It has been observed that persons who receive three to five lethal doses of GB may be saved by massive atropine therapy alone if the drug is given quickly. In such cases, intramuscular administration generally is not effective and injection into the vein or directly into the heart or lungs will be required.

Persons who have received 25, or even 50, lethal doses may survive if artificial respiration is started immediately and continued without interruption for several hours, along with large doses of atropine as indicated.

The atropine dosages mentioned here would seem intolerable; however, a nerve gas victim has a greatly increased tolerance for this drug. In one experiment, a Rhesus monkey survived a multi-lethal dose of GB with treatment by artificial respiration and injection of 0.5 mg. of atropine tartrate per pound of body weight.

The oximes show definite promise as an adjunct to atropine in the treatment of anticholinesterase poisoning. The exact mechanism of their action is not known, but they appear to exert their primary effects on the nicotine-like action of nerve gases. Drugs of this series seem to have a beneficial effect on the reversal of neuromuscular block and possibly in the reactivation of cholinesterase. There has been favorable evidence of improvement of patients accidentally exposed to organic phosphorous insecticides following use of an intravenous infusion of 0.5 to 2.0 grams of 2-PAM (pyridine aldoxime methiodate) or P_2S (pyridine methane sulfonate). The methane sulfonate salt recently was introduced in the United Kingdom for intramuscular injection. At the present time, work is being completed for final recommendations to the Surgeons General of satisfactory soluble compounds for military use.[4]

Oximes alone should *never* be considered as the primary treatment in the severe nerve gas casualty. It is an adjunct to the use of atropine and adequate resuscitation and, properly used, may shorten the time that a severely poisoned patient will require artificial respiration.

"Convulsions must be controlled. Barbiturates are contraindicated in the presence of respiratory depression, but may be used if adequate ventilation is being maintained by the resuscitator. Tridione also is effective."[4]

Other Chemical Agents

Up to this point the discussion has been limited to one among many classes of toxic chemical agents which are found in the arsenals of World Powers. Some of these weapons cannot be mentioned for security reasons. Among those which can be mentioned are incapacitating agents which produce temporary mental confusion, anesthesia, narcosis, paralysis, blindness, skin burns, nausea, etc. Under right conditions, the use of these agents might enable an aggressor to capture a non-protected city and subdue the entire population with virtually no risk to his own troops.

Among the psychochemicals which have been investigated are the lysurgic acid derivatives, particularly LSD 25, which in extremely small doses of the order of 0.05 to 0.30 mg. renders a person incapable of performing normal duties. Another is psilocin, the active principle of hallucinogenic Mexican mushrooms. Both compounds have been synthesized.

An improved form of "mustard gas," the old standby from World War I, is still included among the standard chemical agents in some countries. Other vesicants and skin irritants which have been investigated include the nitrogen mustards, phosgine oxime, and new and improved "tear gases" which irritate the skin as well as the eyes.

In civil defense planning we should recognize that a potential enemy has a wide choice of weapons with which he may inflict almost any desired effect or degree of damage on a non-protected population. These range from multi-megaton thermonuclear warheads through a long list of toxic chemicals to lethal or disabling biologic agents. However, it is possible through adequate planning and advance preparation to protect one's self against these weapons just as against bullets, fires, floods, tornadoes, epidemics, and other hazards to life, health and property.

Protection

Defense against chemical agents consists of detection and identification, individual and collective protection, decontamination, and treatment of casualties.

Detection and Identification—The U.S. Army Chemical Corps has developed effective automatic detection and alarm systems which give warning in the presence of minute quantities of nerve gas, but these are not available for general use. The first indication of a nerve gas attack probably would be the physiologic effects on the victims. Some persons downwind might be warned in time to take appropriate action.

Small, portable test kits have been developed for detecting war gases in the field. These kits give a color reaction in silica gel absorbers, on test papers, detector paint, etc. Detector kits are distributed to all military units down to company or platoon level. They are designed to detect, and identify as to type, hazardous concentrations of most standard war gases which are found in the chemical warfare arsenals of the World Powers. Test procedures require several minutes and must be performed by trained personnel. The results obtained are qualitative and presumptive, and serve only to indicate when it is safe to unmask or to enter an area without protection.

These kits have been procured by the Office of Civil and Defense Mobilization in limited quantity for civilian use. The official OCDM designation is CDV-810.

Other kits have been developed for detecting the presence of chemical agents in food and water.

Individual and Collective Protection—The standard protective mask developed by the U.S. Army Chemical Corps for military use protects the eyes, face and lungs against war gases under normal combat conditions. The filtering unit removes chemical agents from the inhaled air by adsorbtion on chemically treated activated charcoal. Also, it filters out radioactive dust as well as biologic agents which the enemy may have sprayed into the air.

The Office of Civil and Defense Mobilization has procured limited stocks of military-type masks for use of civil defense operational personnel who must continue to perform their duties while under attack. For general civilian use, the U.S. Army Chemical Corps is developing an inexpensive mask which affords the same protection as the military type, but which is less rugged and not suitable for continued wearing under operational conditions. It is contemplated that the civilian type mask eventually will be offered for sale to the general public through commercial channels.

Some types of protective clothing resist penetration by liquid agents and so afford protection to the skin against spray attack or during decontamination operations.

The only collective protection against chemical agents would be gas-proof structures having a filtered air ventilating system. Such ventilating systems have been developed by the U.S. Army Chemical Corps for installation in approved hospitals, underground civil defense emergency operating centers, etc. These systems come as complete units with filters, external ducts, blowers, and an electric or gasoline motor. These units presently are available, and are required to be installed in government-financed underground structures.

Decontamination—Decontamination of war gases may be accomplished by physical removal or chemical decomposition. Liquid nerve gas may be flushed off of the skin with water or decomposed by alkaline solutions. Liquid mustard gas should be blotted off and the skin decontaminated by application of protective ointment which is available to the armed forces.

Open areas, facilities and equipment contaminated by liquid agents eventually are decontaminated by evaporation or weathering. In the case of the common nerve gases, this would be accomplished in a few hours unless the liquid has been absorbed by porous materials. Liquid mustard gas has been known to remain active in the soil for years, but may be decomposed by the action of free chlorine when treated with chlorinated lime, laundry bleach, etc.

Potential enemies of the United States have the capability to launch massive chemical, biologic or thermonuclear attacks against the civilian population. In planning an attack—all other things being equal—the enemy would choose those weapons against which the victim nation has least protection.

The only civil defense measure which provides an acceptable degree of protection against ALL weapons is *underground structures,* equipped with filtered air ventilating systems and supplied with pure water and adequate food for long-term occupancy.

In the critical days that lie ahead, let us not look to the Government to save us. We must provide our own protection just as

our fathers did in pioneer days. The U.S. Public Health Service is providing superb leadership to the medical and allied professions in planning for recovery from war-caused disasters. The American Medical Association's Committee on National Emergency Medical Care under the chairmanship of Doctor Harold C. Lueth is making a high contribution to the survival potential of the nation, and has set a fine example of cooperation between Government and the professions.

In our civil defense planning it should be remembered that it is better to prevent disasters than to pick up the dead and injured after they happen. Therefore let us look to the construction of underground annexes to schools, industrial plants, government offices, homes and—by all means—hospitals, clinics, nursing homes and medical supply warehouses.

I believe it was Governor Val Peterson, former Director of the Federal Civil Defense Administration, who said, "In the next war we shall live underground or die aboveground!"

The time has come when we must *DIG IN OR DIE!*

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Disaster Nursing Test Available

The National League for Nursing's Comprehensive Achievement Test in Disaster Nursing, published on February 1, 1961, is designed to test the professional nurse's ability to function effectively in natural and enemy-caused disasters. Unlike other NLN achievement tests, this one will be available for graduate nurses as well as nursing students nearing graduation.

Assistance in the development of the test was received from persons associated with the NLN-OCDM project in disaster nursing, and representatives of many other organizations and agencies concerned with the problems of disasters and disaster nursing.

In addition to a total score, two subscores will be provided: one in general nursing knowledge applicable to disaster situations, and one in facts and principles peculiar to disasters and disaster nursing. Interested schools and agencies can get information about the test from the NLN Evaluation Service, 10 Columbus Circle, New York 19, New York.

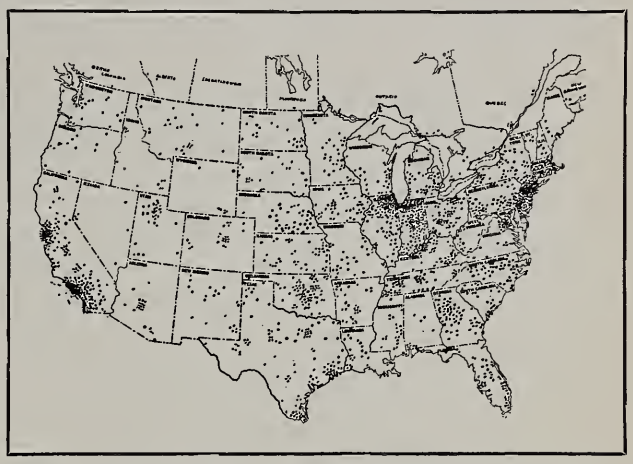
Flying Physicians Are Ready

A unique organization of physicians stands ready at all times to voluntarily meet major medical disasters throughout the United States. Called the Flying Physicians Association, the group of 2000 physician-pilots is capable of rushing health care teams to any part of the country in a matter of a few hours.

The doctors own their own airplanes, and they keep them fueled and equipped with medical supplies and equipment—so they are available on a moment's notice to assist in overcoming a natural or man-made disaster. Each physician has one or more nurses standing by to accompany him on such a mission.

According to Frank H. Coble, M.D., FPA President from Richmond, Indiana, "It was not long after our group organized that we realized we could be a potentially potent force in rendering medical aid in the event of a major disaster in any part of our country."

Doctor Coble observed that a major disaster, such as a thermonuclear war, could virtually destroy trained health personnel in a specific area, to such an extent that medical help would have to come from some distance. "Surface travel would either be destroyed or congested by refugees," he said, "but the light planes of the Flying Physicians would have no trouble landing on improvised airstrips."



The 2000 members of Flying Physicians are well-distributed throughout the United States. They are equipped and ready to respond to medical emergencies.

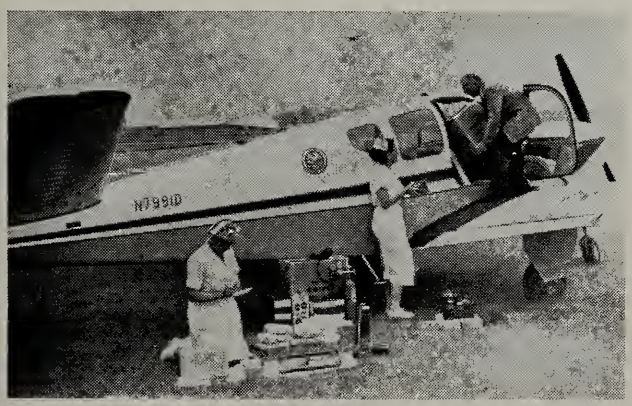
He explained that the initial role of the physicians might only be the relief of suffering and shock, as well as the triage (sorting of casualties) aspect. More comprehensive care could be offered when surface transportation opened up or when major airlifts were instituted.

The Flying Physicians Association estimates that a government-sponsored duplication of their service would cost the taxpayers about $61 million per year. On the other hand, the flying medics are offering their service to the American public at no cost to the government.

National headquarters of the organization is located in Tulsa, Oklahoma. Mark E. DeGroff, Box 3275, is Aviation and Business Administrator.

Members must be in good standing in their local and national medical societies, and must hold a valid aircraft pilot's license.

Port Johnson, M.D., Muskogee, is state chairman of the organization.



A "flying physician" is shown loading his airplane as two nurse-members of his team assist. Among supplies for an emergency flight would be: dressings, bandages, tape, sterile towels, oxygen, syringes, surgical instruments, narcotics, sedatives, vaccines, antitoxins, antiseptics.

Home Preparedness Stressed

The most common query put to state civil defense officials is, "What is my specific role in civil defense?" And this is especially true coming from persons in professional fields.

In the instance of a medical doctor, he would perform the same every day functions —only on an organized and accelerated scale.

But often overlooked by persons in professional fields are the more simple, but necessary, phases of civil defense that are essential to the family home. The "Home Preparedness" program is the first federal program to be aimed directly at the home.

For nearly five years, every state civil defense director across the nation advocated such a program—for the home is the foundation of a strong civil defense program in any community. And the community CD program is the strongest link in the state CD program.

Subject for Workshop

In the beginning, "Home Preparedness" was advocated in areas where local civil defense leadership was lacking. But, today, the Home Preparedness program is a "packaged workshop kit" designed for groups to spread the civil defense word among families, regardless of local CD organization. When a group leader is appointed, or selected, then he or she will receive the workshop guide and the necessary materials to conduct a home preparedness course.

This is an ideal workshop for medical auxiliaries—but there is no reason why the men shouldn't be included, in fact they are encouraged to participate to the extent that time permits.

The printed workshop guide is backed up by a series of film-strips and recordings. This visual aid kit has been mailed to all county CD directors—but kits may be checked out from the state civil defense office.

Subject matter included in the Home Preparedness program is varied and practical. Participants learn the meaning of standard warning signals; the basics of radioactive fallout protection; they learn to plan for emergency heating, cooking and lighting; the meaning of conelrad and emergency sanitation methods.

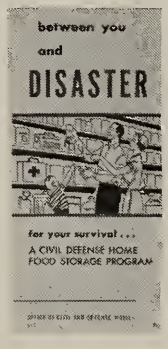
Other Home Preparedness fields include: suggested emergency fire plans for the home; how to purify unsafe water; local CD plans and how to prepare family CD plans.

Survival Kit

It is in the Home Preparedness program that we encounter the terminology, "Survival Kit." This is an all-inclusive phrase that includes suggested food supplies, clothing and first aid supplies.

As such, a complete Survival Kit listing is not published in one assembled form—but two civil defense publications, when combined, do provide listings of the essential items of a Survival Kit. The two CD publications, "Between You and Disaster" and "First Aid—Emergency Action" may be obtained in quantities by merely requesting them from the state civil defense office, or local CD directors.

Show on the chart (opposite page) are the basic items that would make up what is termed a "Survival Kit."



Two publications, one of which is pictured at the left, are available in quantity from local Civil Defense offices or from Oklahoma Civil Defense, P.O. Box 3365, Oklahoma City, Oklahoma. They contain excellent, basic information for the general populace.

FIRST AID SUPPLIES

These emergency first aid items are for a family of four persons or less. Assemble them, wrap in a moisture-proof covering, and place in an easily carried box. Paste this sheet to the box cover and place the box in your shelter area.

FOR THESE PURPOSES	USE THESE	OR THESE	SUGGESTED QUANTITY
For open wounds, scratches, and cuts. Not for burns.	1. **Antiseptic solution:** Benzalkonium Chloride Solution, U.S.P., 1 to 1,000 parts of water.	Quarternary ammonium compounds in water. Sold under trade names as Zephiran, Phemerol, Ceepryn, and Diaprene Chlorides.	3- to 6-oz. bottle.
For faintness, adult dose ½ teaspoon in cup of water; children 5 to 10 drops in ½ glass of water. As smelling salts, remove stopper, hold bottle under nose.	2. **Aromatic spirits of ammonia.**	None.	1- to 2-oz. bottle.
For shock—dissolve 1 teaspoonful salt and ½ teaspoonful baking soda in 1 quart water. Have patient drink as much as he will. Don't give to unconscious person or semiconscious person. If using substitutes dissolve six 10-gr. sodium chloride tablets and six 5-gr. sodium bicarbonate (or sodium citrate) tablets in 1 qt. water.	3. **Table salt.**	Sodium chloride tablets, 10 gr., 50 tablets in bottle.	1 box.
	4. **Baking soda.**	Sodium bicarbonate or sodium citrate tablets, 5 gr., 50 tablets in bottle.	8- to 10-oz. box.
For a sling; as a cover; for a dressing.	5. **Triangular bandage,** folded, 37 by 37 by 52 in., with 2 safety pins.	Muslin or other strong material. Cut to exact dimensions. Fold and wrap each bandage and 2 safety pins separately in paper.	4 bandages.
For open wounds or for dry dressings for burns. These are packaged sterile.	6. **Two medium first aid dressings,** folded, sterile with gauze enclosed cotton pads, 8 in. by 7½ in. Packaged with muslin bandage and 4 safety pins.	a) Two emergency dressings 8 in. by 7½ in., in glassine bags, sterilized. One roller bandage, 2 in. by 10 yds. b) Four large sanitary napkins, wrapped separately and sterilized. One roller bandage, 2 in. by 10 yds.	As indicated.
For open wounds or for dry dressings for burns. These are packaged sterile.	7. **Two small first aid dressings,** folded, sterile with gauze enclosed cotton pads and gauze bandage, 4 in. by 7 in.	Twelve sterile gauze pads in individual packages, 3 in. by 3 in. One roller bandage, 1 in. by 10 yds.	As indicated.
For eyes irritated by dust, smoke, or fumes. Use 2 drops in each eye. Apply cold compresses every 20 minutes if possible.	8. **Eye drops: Castor oil.**	Bland eye drops sold by druggists under various trade names.	½- to 1-oz. bottle with dropper.
For splinting broken fingers or other small bones and for stirring solutions.	9. **Twelve tongue blades, wooden.**	Shingles, pieces of orange crate, or other light wood cut to approximately 1½ in. by 6 in.	As indicated.

For purifying water when it cannot be boiled. (Radioactive contamination cannot be neutralized or removed by boiling or by disinfectants.)	10a. **Water purification tablets** (iodine). Trade names—Globaline, Bursoline. 10b. **Household bleach solution** (approx. 5% available chlorine) 3 drops per quart.	Tincture of iodine or iodine solution (3 drops per quart).	a. Bottle of 50 or 100. b. One small bottle.
For bandages or dressings: Old soft towels and sheets are best. Cut in sizes necessary to cover wounds. Towels are burn dressings. Place over burns and fasten with triangular bandage or strips of sheet. Towels and sheets should be laundered, ironed, and packaged in heavy paper. Relaunder every 3 months.	11. **Large bath towels.**	None.	2.
	12. **Small bath towels.**	None.	2.
	13. **Bed sheet.**	None.	1.
For administering stimulants and liquids.	14. **Paper drinking cups.**	Envelope or cardboard type.	25 to 50.
Electric lights may go out. Wrap batteries separately in moisture proof covering. Don't keep in flashlight.	15. **Flashlight.**	Must be bought.	1.
	16. **Flashlight batteries.**	Must be bought.	3.
For holding bandages in place.	17. **Safety pins, 1½ in. long.**	None.	12 to 15.
For cutting bandages and dressings, or for removing clothing from injured body surface.	18. **Razor blades, single edge.**	Sharp knife or scissors.	3.
For cleansing skin.	19. **Toilet soap.**	Any mild soap.	1 bar.
For measuring or stirring solutions.	20. **Measuring spoons.**	Inexpensive plastic or metal.	1 set.
For splinting broken arms or legs.	21. **Twelve splints, plastic or wooden,** ⅛ to ¼ in. thick, 3½ in. wide by 12 to 15 in. long.	A 40-page newspaper folded to dimensions, pieces of orange crate sidings, or shingles cut to size.	As indicated.

Note.—To sterilize substitutes, wrap in square cloth, aluminum foil, or brown wrapping paper, and place in 300-degree oven for one hour.

Food

To estimate how much food you should buy for *your* family's 2-week home food storage, multiply the number of people in your household by the amounts listed below. Amounts listed below are for one person for two weeks. If the children are young, the amounts can be decreased by one-fourth. If the children are infants, canned baby foods should be substituted for some of the other canned foods. Be sure to plan for old people or invalids.

Check "PANTRY" at least once a month, preferably more often, and rotate regularly.

Bottled water must be changed every six weeks.

MILK: Powdered nonfat dry, 2 pkgs.; evaporated, 4 (14½-oz.) cans.

JUICES: Tomato, 2 (1-qt. 14-oz.) cans; Orange, 2 (1-qt. 14-oz.) cans; Grapefruit, 2 (1-qt. 14-oz.) cans.

FRUITS: Peaches, 2 (1-lb. 14-oz. cans; Pears, 2 (1-lb. 14-oz.) cans; Dried prunes or apricots, 2 lbs.

VEGETABLES: Tomatoes, 4 (16-oz.) cans; Peas, 4 (16-17-oz.) cans; Corn, 2 (12-16½-oz.) cans; Green beans, 2 (15½-oz.) cans.

SOUPS: Assorted, 8 (10½-oz.) cans.

MEATS AND MEAT SUBSTITUTES: Beef stew, 2 (1-lb.) cans; Salmon, 2 (1-lb.) cans or Tuna, 4 (6-7-oz.) cans; Spaghetti and meat balls, 2 (15½-oz.) cans; Baked beans, 2 (1-lb.) cans; Cheese, 2 jars; Peanut butter, 2 jars.

CEREALS: Ready-to-eat, 14 (individual-serving pkgs.).

CRACKERS-COOKIES: 2 boxes.
BEVERAGES: Instant coffee, 2 (2-oz.) jars or instant tea, 2 (1-oz.) jars or instant cocoa, 2 (1-lb.) pkgs.

SOFT DRINKS: 24 bottles.

Other Supplies

Water in jugs or bottles, salt, sugar.
Matches, fuel, cooking utensils, can opener, tableware and utensils, paper supplies, old newspapers.

Portable radio, flashlight, candles and holders, first-aid kit, blankets, pail, garbage container.

The Bible or other family religious requirements.

Games and amusements for the children.
Optional supplies: Candy, gum, tobacco.

If you carefully study the recommended list of items you should have on hand, and which make up a Survival Kit, you will readily note they are, in most instances, every day items. Therefore, you might comment that you are not being provided new or startling information.

But—could you put your finger on each of the items in less than three minute's time? Are the various items assembled, or centralized, and readily accessible? Do all members of your household know where all of these items are located? Do all members of your household know how to use or apply the first aid items?

If kitchen cabinet space, or pantry space, permits—you might centralize the foods on one particular shelf. The key to the situation is "organization within the household."

County and city medical associations desiring printed copies of the two publications, or any civil defense publication, should address their requests to Oklahoma Civil Defense, P.O. Box 3365, Oklahoma City 5, Oklahoma. These brief and easy to read CD publications may be obtained in sufficient quantities for individual distribution.

Ninth Annual Conference on Disaster Medical Care

"Defense Training for all—A resource for National Defense" has been set as the theme for the ninth annual Conference on Disaster Medical Care in New York City, Saturday, June 24.

Sponsored by the American Medical Association's Council on National Security, the theme of the one-day meeting at the Statler-Hilton Hotel will be developed by the United States Air Force Medical Service.

Following opening remarks by Doctor Leonard W. Larson, AMA president-elect, Bismarck, North Dakota, Maj. Gen. O. K. Niess, surgeon general of the Air Force, will discuss the adaptability of military medical experience, research, and operations in civilian disasters.

The morning session, under the general heading, "The Problem," will include discussions on Nuclear War and Your Community, The Value of Training and Exercises, Transportation of the Injured, and Communications. A symposium entitled "Organizing Community Resources" will portray the civil defense plans and activities of a local mayor, police and fire chiefs, professional health representatives, and other local groups.

"Meeting the Problem" will be the general topic for consideration at the afternoon session. Specific subjects for discussion are Radiation Fallout Detection and Monitoring; Evaluating Homes, Buildings and Other Shelters; Rudiments of Universal First Aid Training; and Techniques for Survival—Water, Food, Clothing, Shelter Improvisations.

Other program subjects will be presented on Mass Behavior Patterns in Disaster; Legal Obligations, Public Laws, Martial Law; Moral Obligations in Disaster; and Defense Planning—A Corporate Effort for Survival.

An interesting feature of the program is a one hour skit on "Community Responses to Disaster."

Persons desiring to attend the conference should write to the AMA Council on National Security, 535 North Dearborn Street, Chicago 10, Illinois, for additional information and advance registration.

Civilian Protection Discussed In Germ or Gas War

As a defense against possible biologic or chemical warfare, the Office of Civil and Defense Mobilization (OCDM) is planning a nationwide detection system and a program calling for mass distribution of protective masks.

Plans for protecting the civilian population against such attacks were discussed by Leo A. Hoegh, former OCDM director, in an exclusive interview with *Today's Health* magazine, published by the American Medical Association.

"Our nationwide fallout detection and monitoring network is being equipped to detect gas and germ weapons effects," Hoegh said in (March) *Today's Health.* "This will take time and money, but the work is proceeding."

Early detection, identification, and warning systems are a major defense against chemical and biologic warfare.

OCDM also is preparing for mass production of a civilian protective mask of new design which will provide easy breathing, good vision, and easy conversation, Hoegh said.

In the new mask, he said, the bulky canister used to filter out the harmful agents has been replaced by filter pads located at cheek positions.

Public distribution of the masks will be through selected retail stores at about $2.50 each, he said. They will be available in six sizes.

"A public information program concerning the use of the protective masks will be timed with their retail distribution," he added.

Asked specifically about biologic warfare, Hoegh said:

"The Department of Health, Education and Welfare, under OCDM delegation of authority, has initiated the program to protect the civilian population. Its major objective is education of individuals and families in self-protective measures."

"This program also includes the control and prevention of diseases resulting from BW (biologic warfare) attacks; the safeguarding of our food, pharmaceutical, and water supplies; special training and education of doctors, nurses, and other professional personnel in the recognition and diagnosis of the diseases involved; rapid detection and identification of the causative agents; care, treatment and rehabilitation of casualties, and the stockpiling of necessary emergency drugs, pharmaceuticals, equipment, and supplies."

Citizens should have all standard immunizations offered by their doctor and local health authorities, he said, and the highest priority has been given by OCDM to the research and development of immunizing agents against diseases for which no protective biologics now are available.

Although there has been much talk about biologic and chemical warfare, Hoegh pointed out, "this black art hasn't yet reached the level of efficiency of nuclear war."

A recent special study for the Senate Foreign Relations Committee has described chemical and biologic weaponry as "exaggerated" as to present military utility and still far from any possible use capable of strategic decisiveness, he said, although this picture may change in the next few years.

The graver dangers of nuclear war merit our more intensive efforts, he said, but we certainly are not neglecting biologic and chemical warfare defense.

Texas Stockpile Holds $5 Million in Medical Supplies

Bastrop, Texas, site of old Camp Swift, is now converted for use as a Civil Defense Medical Stockpile.

Approximately $5 million worth of supplies are ready for immediate shipment, and adequate transportation is available.

The supply point is designed as a "back up" supply, to be used *after* local resources are exhausted.

Multi-Purpose Food Developed for CD Shelters

A multi-purpose food called MPF has been developed for storage in home shelter areas.

The dry, granular mixture is rich in protein and contains nine essential vitamins and minerals. It is so highly concentrated that two ounces provides one-third the minimum daily adult requirements for vitamins A and D, thiamine, riboflavin, niacin, iron, calcium, phosphorus and iodine; plus one-third of the recommended daily adult allowance for protein.

MPF was developed by General Mills in cooperation with the Meals for Millions Foundation of Los Angeles. It is particularly suited for long term storage, and thus, with its other qualities, is an ideal civil defense item.

The Office of Civil and Defense Mobilization recommends, among other things, that everyone have a two weeks food supply in his home shelter area. MPF is one simple, inexpensive way of complying with this recommendation insuring adequate nutritional protection during short periods of emergency.

The manufacturer suggests that one 4½ pound tin of MPF be stored in the shelter for each member of the family, plus like quantities in each automobile operated within the family.

MPF is a food which is best eaten in blends or mixtures with other foods. For emergency use, however, the precooked substance may be eaten alone. It will appease the appetite and dietary demands, but will need to be supplemented to prevent loss of weight. Two ounces of MPF contains 150 calories.

Tins of MPF, each of which supply food for one person for twelve to fourteen days, are available in some grocery stores. Many persons, however, will find it necessary to order MPF (at $2.50 per tin) from General Mills, Inc., Box 300, Minneapolis 60, Minnesota. The food comes hermetically sealed against infestation or contamination.

12th County Medical Society CD Conference

The American Medical Association is sponsoring its 12th County Medical Society Conference on Disaster Medical Care, to be held November 4-5, 1961, at the Palmer House, Chicago.

This meeting brings together representatives of state and county medical societies from all over the United States. On Saturday afternoon, November 4, eight regional workshop sessions are scheduled, providing an opportunity for the conferees to discuss mutual problems and develop plans to overcome these problems. In past meetings, these workshops have been well received and of much practical value to "local level" representatives.

A symposium at the meeting will be devoted to "The County Medical Society and Disaster Medical Care." Topics will include: Objective-Purpose-Organization for Disaster Medical Care; Relationship of County and State Societies in Disaster Planning; Educational and Training Programs; Mutual Aid in Large-Scale Disaster—County and State Concepts; Health Mobilization in Total Warfare; and Rural Medical Support for Target City Disaster.

A second symposium will include pertinent topics under the general heading of "Training of Allied Health Professions and Services." Progress reports will be given by the Office of Civil and Defense Mobilization and the PHS Division of Health Mobilization.

William H. Reiff, M.D., Chairman of the OSMA's Disaster Medical Care Committee, is urging Oklahoma's county medical societies to send representatives to the conference. Doctor Reiff points out that aside from Oklahoma and Tulsa counties, no other counties have participated in previous conferences.

"Effective disaster medical care planning begins at the local level," Doctor Reiff said, "and I hope our county societies will take advantage of the information to be offered at this important meeting."

Roster of Military Medical Personnel

NATIONAL GUARD (45th Infantry Division)

Col. Claude B. Knight, Wewoka, Division Surgeon, 45th Inf. Div.

Col. John B. Miles, Anadarko, Battalion Commander, 120th Med. Bn.

Lt. Col. Paul Kernek, Holdenville, Battle Group Surgeon, 1 BG 180th Inf.

Capt. Norman A. Cotner, Grove, Battle Group Surgeon, 1 BG 179th Inf.

Capt. Robert R. Hillis, Tulsa, Battle Group Surgeon, 2 BG 179th Inf.

Lt. Max A. Deardoff, Tulsa, Commander Medical Platoon, Hq. Co. 2 BG 179th Inf.

Capt. Bill E. Woodruff, Hugo, Commander Medical Platoon, 2 BG 180th Inf.

Lt. James R. Rhymer, Clinton, Battalion Surgeon, 1 Med. Tk. Bn. 245th Armor

Lt. Billy E. Blevins, Oklahoma City, General Medical Officer, 120th Engineer Battalion

Capt. James W. Wilson, Atoka, Surgeon, 45th Inf. Div. Arty.

Capt. Boyd K. Lester, Oklahoma City, Div. Psychiatrist, 45th Inf. Div.

Capt. Rodney D. Steward, Oklahoma City, Aviation Medical Officer, 45th Inf. Div.

Capt. William R. Cleaver, Oklahoma City, Company Commander, Co. B (Cir.) 120th Med. Bn.

Lt. Sterling M. Daubrava, Jr., Midwest City, General Medical Officer, Co. B (Cir.) 120th Med. Bn.

Capt. William G. Bernhardt, Midwest City, General Medical Officer, Co. B (Cir.) 120th Med. Bn.

Lt. Dougles C. Wilkerson, Jr., Oklahoma City, General Medical Officer, Co. B (Cir.) 120th Med. Bn.

U. S. ARMY RESERVE

Col. William H. Reiff, Hq., 95th Div., Okla. City

Lt. Col. Henry D. Wolfe, Hq., 95th Div., Okla. City

Col. Hervey A. Foerster, CO, 44th Evac. Hosp., Okla. City

Col. Edward T. Cook, Jr., 44th Evac. Hosp., Okla. City

Col. James D. Dewar, 44th Evac. Hosp., Okla. City

Lt. Col. James T. McInnis, Sr., 44th Evac. Hosp., Okla. City

Maj. Paul T. Condit, 44th Evac. Hosp., Okla. City

Maj. James A. Webb, 44th Evac. Hosp., Okla. City

Capt. David W. Foerster, 44th Evac. Hosp., Okla. City

Capt. Robert H. Smiley, 44th Evac. Hosp., Okla. City

Capt. Harold H. Mings, 44th Evac. Hosp., Okla. City

Capt. Robert E. Myers, 44th Evac. Hosp., Okla. City

Capt. Richard M. Lee, CO Med. Detach., 4th Obsn. Bn., 26th Arty., Norman, Okla.

Maj. David J. Geigerman, 91st Trans. Bn. (Helicopter), Okla. City

Maj. John R. McInnis, 310th Replacement Gp., Okla. City

Maj. Arthur W. Buswell, CO, 372nd Med. Detach., Enid, Okla.

Capt. John M. Hill, Jr., 401st Arty. Group, Tulsa, Okla.

Capt. William E. Hall, CO, 425 Med Detach., Tulsa, Okla.

Capt. Frank A. Klingman, 425 Med. Detach., Tulsa, Okla.

District I Nurses Plan Course on "Expanded Function"

A twenty-hour workshop course on "Expanded Function" is being planned by District I of the Oklahoma State Nurses Association.

The term "expanded function" is used to describe the roles to be played by persons other than physicians, in the event of a large-scale disaster. Mass casualty conditions will make it necessary to relieve surviving physicians of functions which others can perform.

Recognizing this, and in cooperation with the National Emergency Medical Care Plan, the nurses will include on their program such topics as: Immunizations, Parenteral Medications, Catheterization, Management of Normal Obstetrics, Emergency Tracheotomy, Bandages and Dressings.

Selected List of Training Aids

These visual aids are useful in orienting and training various groups in aspects of health mobilization. They should be obtained directly from the distributor listed for each. Further references to training aids may be obtained from the Oklahoma State Medical Association's Executive Office, Box 9696, Oklahoma City.

Disaster Aid: Public Health Aspects (16 mm, b&w, sound, 11 min., 1955). Explains the health problem created by natural disasters and the methods used to solve these problems, using a flood as an example. Demonstrates the role of local, State, and Federal health agencies in combatting the resultant public health dangers. Suitable for showing to civil defense, public health, and civic groups. *Available:* Chief, Communicable Disease Center, Public Health Service, U.S. Department of Health, Education, and Welfare, Atlanta 22, Georgia, Attention: Audiovisual.

Disaster Plan (16 mm, color, sound, 17 min.). This film shows how a hospital and community are able to spring into action to care for victims under a smoothly coordinated advance plan of action. The film is based on procedures of the American Hospital Association, as set forth in their booklet, "Principles of Disaster Planning for Hospitals," and is produced in cooperation with that organization. Suitable for hospital and public health personnel. *Available:* Abbott Laboratories, Film Service Department, North Chicago, Illinois.

Lease of Life (16 mm, b&w, sound, 25 min.). An introduction and orientation to the purposes and use of a New York State Improvised Emergency Hospital in a simulated disaster. Suitable for showing to a general audience. *Available:* New York State Department of Health, Office of Medical Defense, 84 Holland Avenue, Albany 8, New York.

Nerve Gas Casualties and Their Treatment (16 mm, color, sound, 25 min., 1957). Explains causes and effects of nerve gases and treatment of casualties. Discusses detection of and protection from gases, and outlines various methods of treatment and decontamination. Suitable for showing to medical, paramedical and associated professional groups, and also official civil defense personnel. *Available:* U.S .Department of Agriculture, Motion Picture Service, Washington 25, D.C.

Off-Site Monitoring of Fallout from Nuclear Tests (16 mm, color, sound, 29 min., 1958). This shows the radiological safety activities of the U.S. Public Health Service in the off-site area of the Atomic Energy Commission test site in Nevada. Suitable for showing to a general audience. *Available:* Chief, Communicable Disease Center, Public Health Service, U.S. Department of Health, Education, and Welfare, Atlanta 22, Georgia, Attention: Audiovisual.

Public Health Problems in Mass Evacuation (16 mm, b&w, sound, 13 min., 1957). Presents public health problems arising from the mass evacuation of a large urban population. Suitable for civil defense and public health personnel, Parent-Teacher Associations, civic clubs, and television audiences. *Available:* Chief, Communicable Disease Center, Public Health Service, U.S. Department of Health, Education, and Welfare, Atlanta 22, Georgia, Attention: Audiovisual.

The Day Called "X" (16 mm, b&w, sound, 28 min., 1958). Prepared by CBS. The story of Portland, Oregon's preparation for atomic attack. This dramatic motion picture provides important guidelines for other communities to follow in developing their civil defense programs within the context of existing governmental services. Suitable for showing to a general audience, civic groups, and for television use. *Available:* Office of Civil and Defense Mobilization, Battle Creek, Michigan.

Filmograph

The Civil Defense Emergency Hospital (16 mm, color, sound, 16¼ min., 1959). Illustrates the purpose and function of the 200-bed emergency hospital unit. Outlines the history, storage procedures, transportation, setting up and operation of the CDEH. Suitable for showing to a general audience, and for television use. *Available:* Office of Civil and Defense Mobilization, Battle Creek, Michigan.

Filmstrip

The Civil Defense Emergency Hospital (Slidefilm, 35 mm, color, 45 slides and 11 titles, 1961). An orientation to the origin, mission, contents and functions of the 200-bed Civil Defense Emergency Hospital. Views from training exercise show the operation of each functional section of the hospital. Suitable for lay personnel, and for medical, allied-medical, civil defense, public health, and associated professional groups. Helpful in briefing groups preparing for a training exercise with the hospital. *Available:* Chief, Training Branch, Division of Health Mobilization, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington 25, D.C.

Auxiliary Meeting Features "Food for Survival"

Among the principal topics to be discussed when the Woman's Auxiliary to the AMA meets in New York City, June 26-28, will be the presentation of "Food for Survival," by Mrs. Neil W. Woodward, Oklahoma City.

Mrs. Woodward is Chairman of the Auxiliary's national committee on Civil Defense.

More than 3,000 physicians' wives are expected to attend the meeting, which is being held in conjunction with the AMA's Annual Meeting, June 25-30. Headquarters for the Auxiliary will be the Roosevelt Hotel.

Auxiliary News

U.S. Population Prepared

"Organization completed—22 million U.S. citizens organized in volunteer self-defense groups, fire-fighters, shelter attendants and first-aid workers! Three compulsory training courses completed for all citizens, with plans this year to complete 18-hour courses for every citizen between 16 and 55."

Do these facts help you breathe more easily, relax a little? Read further: "Every home, every factory and every school have bomb shelters, or the equivalent of shelter for emergency protection. Cities have adequate protection; also, every urban citizen has the added comfort of knowing evacuation procedure, with assurance that the government has facilities for handling transference to outlying communities."

Then, why all the furor, if we are making such progress? What is wrong? Just this: unfortunately, this comforting article is transference of fact. This information is not by any imaginative projection applicable in the United States of America—statistics are from another U.S.—Soviet Russia. The report was made by Leon Goure, leading authority in our country on Soviet civil defense, at a civil defense conference held in February at the University of California at Los Angeles.

Sometimes it has seemed that Auxiliary members might possibly spend more time listening to TV commercials advertising detergents than in listening to civil defense programs giving instructions on war deterrents. What is concretely considered a deterrent? Mrs. Neil Woodward, Oklahoma County, who is our National Civil Defense Chairman, reports in the National *Bulletin* on the Conference on Disaster Medical Care held jointly by the United States Public Health Service and the AMA Council on National Security.

Mrs. Woodward states in her report: " . . . it was emphasized that a prepared civil defense is an essential deterrent to war and that the nation can survive if enough people are willing to make adequate preparation now." She explains the availability in the near future of a medical self-help program, definite instructions and slides, *The Primer for Survival.*

Auxiliary Apathy

What has our attitude as Auxiliary members been, what is it now, and what is it to be?

We have had national, state and county civil defense committees. They have, in turn, presented reports and information in regard to materials available for programs and community coverage to every member attending auxiliary meetings. What has happened is this: civil defense questionnaires have never been returned; and home preparedness kits may still lie in desks, or they may have been tossed out—at least, they have seldom been returned.

Each year we are asked in annual reports what programs have been well-attended. Civil Defense programs are often either omitted completely or poorly attended; book reviews or style shows are always best attended. Some auxiliaries have apologetically sneaked programs, by announcing some other subject, then greeting those attending with teams of qualified members who type blood down the line. A civil defense demonstration follows—and surprised participants, truly captive, are spoon-fed essential information they would have otherwise missed.

The Future?

Now we are jolted. Major Gagarin has accomplished this, with the aid of increased tension in regard to the Cuban revolt. As always, we urge you to read and to study and to listen and to evaluate. Read *U.S. News and World Report: Russia's Triumph in Space;* Major General Medaris's *Countdown for Decision;* work with your local Civil Defense; contact your County Medical Society's chairman on civil defense. Auxiliary members *always* rally when they are aware of the time and the need. Both have arrived.

Winslow Homer "THE HERRING NET" *Art Institute of Chicago.*



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WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

GENERAL PRACTICE, age 29; three years experience; military service completed; Oklahoma University School of Medicine graduate; married and have children; AAGP. Desires to locate with a small group or with another man, in town of 5,000 or larger. Available immediately; would also consider solo practice. Contact Key C, c/o Oklahoma State Medical Association.

WANTED: Physician to join Clinic and Hospital Staff at Clinton-Sherman Air Force Base. Contact Col. S. A. O'Brian, 857th Medical Group, Clinton-Sherman AFB, Oklahoma. Phone Clinton, Oklahoma FA 3-2010, Ext. 326.

WANTED: General Practice partnership or salary leading to partnership location by 1956 graduate of the University of Oklahoma School of Medicine. Age 29, married, two children. One year rotating internship, one year rotating general practice residency and two and one half years in the U. S. Navy. Available after April 15, 1961. Write Jack D. Shirley, Lt. MC USNR, 4332 NW 22nd, Oklahoma City, Phone WI 3-3622.

WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

HOUSE PHYSICIANS NEEDED immediately for Tulsa's new St. Francis Hospital. Contact Key B, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma, for further information.

FOR SALE: Instruments and office equipment. Contact C. O. Epley, M.D., 1200 North Walker, Oklahoma City, Oklahoma.

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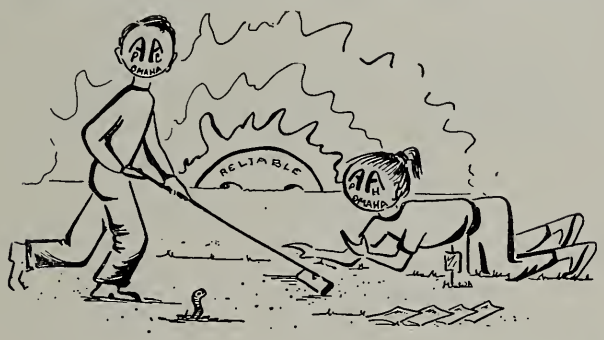
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NATIONAL

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May 22-24—American Thoracic Society. Netherland-Hilton, Cincinnati, Ohio.

May 22-25—American Orthopaedic Association. The Ahwahnee, Yosemite, California.

May 22-25—American Urological Association, Inc., Biltmore Hotel, Los Angeles.

May 29-31—American Gynecological Society. The Broadmoor, Colorado Springs, Colorado.

June 12-14—American Neurological Association. Hotel Claridge, Atlantic City.

June 22-23—American Rheumatism Association. Hotel Roosevelt, New York City.

June 22-26—American College of Chest Physicians. Hotel Commodore, New York City.

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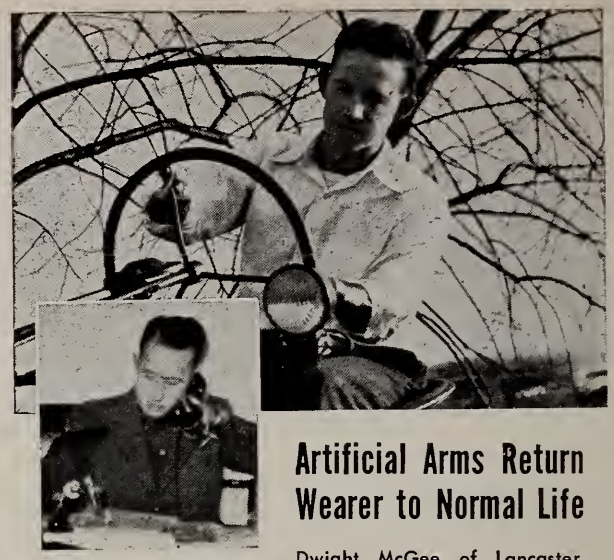
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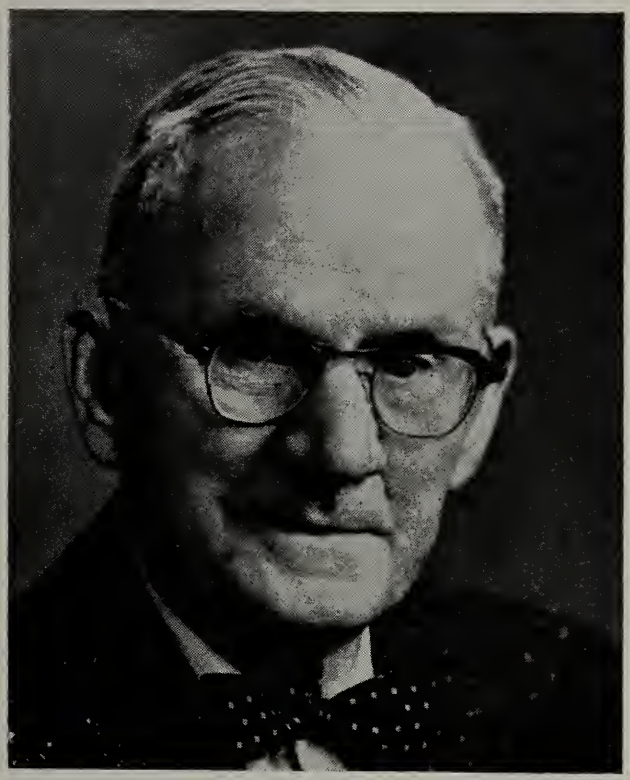
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Editorials

Arcey Bee Has Gone Away*



R. C. BAKER, M.D.

At four a.m., on the morning of April 18th, Doctor R. C. Baker quietly left us. He had been a member of the medical profession for considerably more than fifty years. I have never known a physician with a greater desire to be of service to his profession, than was Doctor Baker.

He loved his country—throughout most of his adult life, Doctor Baker had been a member of the military. He first entered service in World War I. Following this he returned home and organized the medical detachment of the 189 F.A., of the 45th Division. He spent many years in the training of his men. As a result, when the division was called into active duty in World War II, no segment of this illustrious organization was more alert and ready than was this medical unit.

He loved the medical profession. More than twenty years ago, Doctor Baker was elected president of the Garfield County Society. He showed up at the first meeting with a sheath of papers under his arm, and passed out a sheet to each of those present. This was the first edition of the Bulletin, which he had typed and mimeographed by hand. His unusual sense of humor caught the fancy of those who received a sheet and he was urged to continue. This he did and as the years passed by the Bulletin became bigger and better. It developed into a regular publication, beautifully done and mailed out to more than twelve hundred people each month. Doctor Baker loved it; it was entirely the product of his own efforts.

He had a little different philosophy concerning this publication than most editors have. He did not intend that it be primarily a scientific journal; there were many others which covered full and well this field. He preferred the lighter vein, enjoyed a good joke. Many times he said, "You can get a lot of laughs out of life, if you can listen and not get mad." He often told me that if he could not say anything good about an individual, he preferred to remain silent—he was content to allow others to throw the brick bats.

Doctor Baker was really a fine, wholesome and good man—dedicated, friendly and happy. He laid no claim to being a giant in medicine, but those of us who knew him best will remember his unselfishness and his desire to be of service in the interest of those forces which he admired.—*W. P. Neilson, M.D.*

**The Bulletin of the Garfield-Kingfisher County Medical Society was started by R. C. Baker, M.D., with his induction into the presidency of the society. It was developed by Doctor Baker into one of the best county journals published and was edited by him until his death on April 18th.* The Journal, *in recognizing his accomplishment in this field of journalism, asked a colleague and long-time friend, Doctor W. P. Neilson, to comment on Doctor Baker's many contributions.*

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Curriculum Changes in the School of Medicine

The faculty of the School of Medicine approved changes in the curriculum to begin with the 1961-62 school year which are designed to improve the student's situation for learning, to approach more nearly the concept of graduate school experience, and permit the student time to explore in more depth those areas of interest to him. The high school and college students stereotype of the student in medical school needs to be changed from that of a student weighed down with unending hours of study and memorization, working to get things behind him, to that of a student who is excited about what he is doing and learning and anxious to get on with learning more and more.

The faculty considered the most essential ingredient of a curriculum to effect this change to be more time for reflection and appreciable time for electives. Without sacrificing necessary elements in medical education, this could only be done by lengthening the school year. The fourth year is, at present, 45 weeks. This remains unchanged, but year I is increased from 34 to 36 weeks and years II and III to 40 weeks. An additional economy of time is the placing of the final examination in a course in a regular class period. This saves a week twice each year which had previously been set aside for final examinations.

The number of applicants for medical schools has steadily dropped off. When this began, it was considered to be due to the low birth rate of the depression of the 30's. This doesn't explain the situation now. Industry is bidding for the scientifically inclined student. A ready job with good pay in a much shorter period of time is attractive. The hassel between medicine and government over socialization has had its effect. Readily available scholarships in other fields find eager takers.

The faculty believes that the curriculum change reflects a change in concept of medical education which may keep at home some of the fine students who would otherwise go to some out of state medical school. The home town physician can do much to help a student make up his mind about medicine as a career and to select our medical school. He has four stumbling blocks or wind mills to lay low:

1. A system is important to him, but he has every reason to believe that a life of service or teaching in medicine is an unbelievably rewarding one, regardless of the system.

2. Given a fine medical school like the University of Oklahoma, the product of the school will be determined by the quality of the student. In other words, a good student is going to come out of our university as well educated as he would come out of any other. There is no reason to advise a bright boy from one's home town to go some place else.

3. While change does not necessarily mean progress or improvement, the changes that are being made in our curriculum are the result of studies and experiments in medical education all over the country. It is difficult for the physician to believe that how it was done in his day and the teachers he had could be improved upon. No one questions the quality of both in that day. This is another day and improvements are occurring in medicine and medical education as they are in everything else.

4. It is difficult to differentiate between what is education and what is training. Much of the medical school work of physicians, who finished a number of years ago, was devoted to training and not to education. Medical educators now consider training a function of post doctoral years. Do not, therefore, be disturbed by the fact that students of today are not learning techniques that you were taught. They are instead getting a superb background on which to build in their internships and their residencies. One could not ask for any more.

In discussing medicine and medical schools with interested high school and college students, one should be positive and leave out the *buts*. After all, there are few of us who would change.



PRESIDENT'S LETTER

INAUGURAL ADDRESS

May 8, 1961

Thank you, Doctor Brown.

Members of the Oklahoma State Medical Association, members of the Woman's Auxiliary and Honored Guests: I accept the assignment.

I want to congratulate Doctor Walter E. Brown upon his most effective and successful leadership during the year 1960-61, and the House of Delegates for having elected him to the office of President. He has made a challenging pattern for his successor.

I wish to congratulate Mrs. Virgil Ray Forester and the Auxiliary for a most progressive and useful year of hard work. It was unusually pleasant to visit with the members of the Woman's Auxiliary this morning.

I congratulate Doctor Wendell Smith and the Tulsa County Medical Society for the planning and conduct of this 55th Annual Meeting. I would like further to express great satisfaction for having been invited to enjoy with them the visit of Doctor Edward R. Annis a few days ago. It might well be considered a worthy project for us to encourage the debate between Doctor Annis and Mr. Abraham Ribicoff, Secretary of Health, Education and Welfare. However, I do not expect it. It seems unlikely that anyone who apparently has the intelligence of Mr. Ribicoff would dare enter into a public discussion with Doctor Annis.

Doctor Annis gave me a great encouragement when he declared in effect "the fact that the members of an organization elevate one to a position of honor does not necessarily indicate that he is a good speaker, or that he knows anything about debate."

It is now proposed that all members of the OSMA shall reaffirm their desire to continue improvement of the care of the sick, of all ages, regardless of ability to pay. The method shall bear reference to five particular areas of activity.

I. A member of the OSMA shall be available in every high school in Oklahoma for the purpose of talking with and advising students who are, or may become interested in Medicine as a career.

II. Further provision shall be made available for the economic comfort of Medical School undergraduates.

III. The system of medical-law-indoctination of all candidates for license, by examination or by reciprocity, shall become a joint activity of the OSMA and the State Board of Medical Examiners.

IV. The formal program of indoctrination for all new members of the OSMA shall become a part of the policy in each component unit. Reference should be made to include orientation in various activities, such as religious, charity, civic, political activities and the recognition of obligation to the profession as such. The Oklahoma County Medical Society program is a good example.

V. The programs of postgraduate professional training should be extended.

As an individual I promise to be available and to help in any way I can. I am impressed with the scope of activities and my own limited abilities. I am more impressed and pleased with the fact that thus far in organizing the various committees and councils, the response has been most cordial. Because of your willingness to continue and extend participation I do now confidently expect the year 1961-62 to be a rewarding and useful experience for all of us.

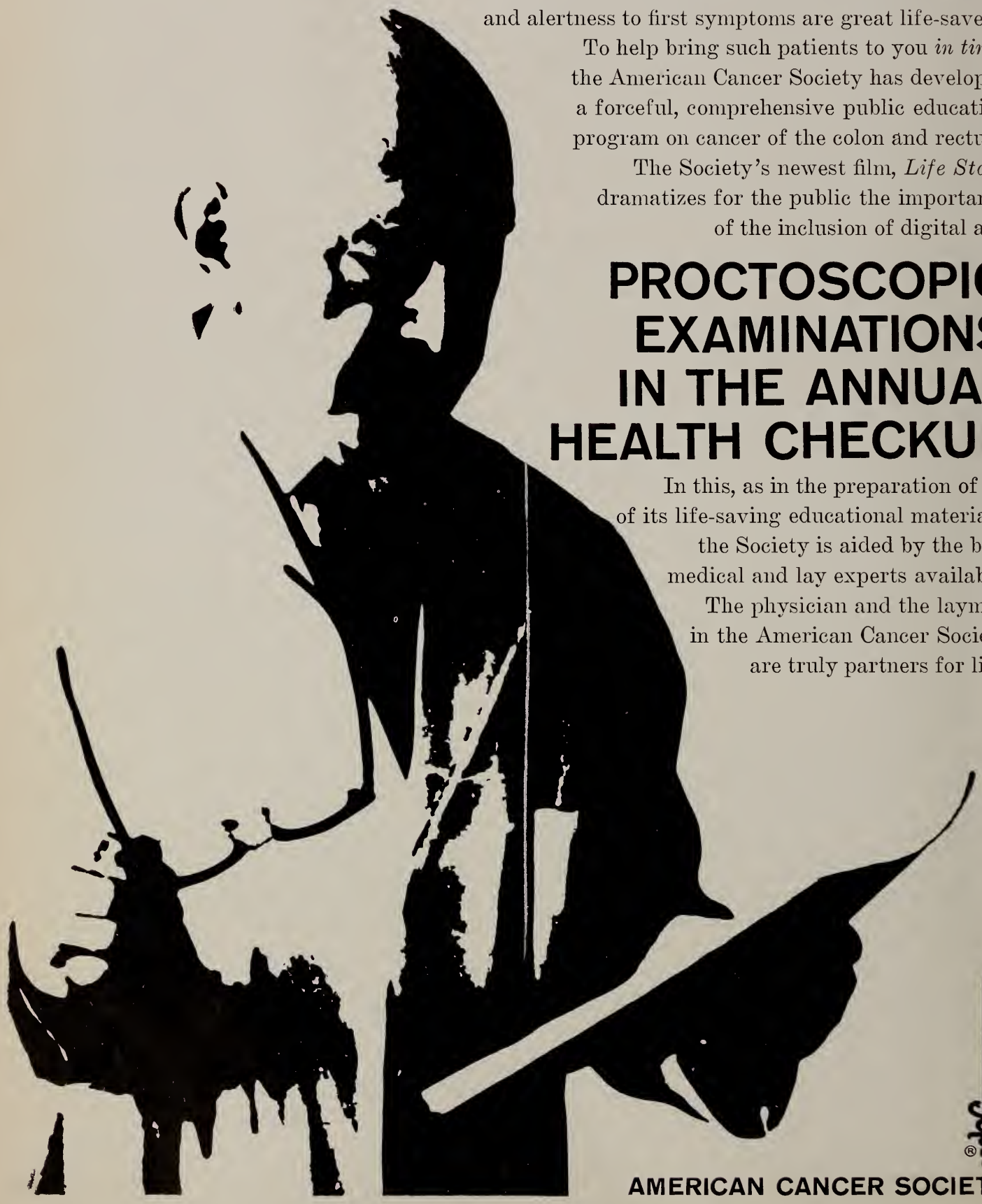
I further promise that—in so far as it may be possible—due regard shall be given to the value of your time and the conservation of your energies, so that you may continue more effectively in the major project—the Practice of Medicine.

Clinton Gallaher M. D.
President

In 1961, you, the nation's physicians, will diagnose an estimated 70,000 cases of cancer of the colon and rectum. Although potentially this is a highly curable cancer, each year more than two thirds of such patients die of the disease. Thousands are lost needlessly. They could be saved by proper medical treatment of the disease, found by annual examination, in its presymptomatic and most curable stage. The regular health checkup and alertness to first symptoms are great life-savers. To help bring such patients to you *in time*, the American Cancer Society has developed a forceful, comprehensive public education program on cancer of the colon and rectum. The Society's newest film, *Life Story* dramatizes for the public the importance of the inclusion of digital and

PROCTOSCOPIC EXAMINATIONS IN THE ANNUAL HEALTH CHECKUP.

In this, as in the preparation of all of its life-saving educational materials, the Society is aided by the best medical and lay experts available. The physician and the layman in the American Cancer Society are truly partners for life.



AMERICAN CANCER SOCIETY

Scientific Articles

The ideal therapy in patients with renal artery stenosis and hypertension is salvage of the kidney and reduction of hypertension by renal revascularization.

Renal Artery Stenosis With Hypertension*

Case Report of Successful Surgical Treatment

J. M. INGALLS, M.D.
DAVID D. SNYDER, M.D.
GILBERT S. CAMPBELL, M.D.

GOLDBLATT'S STUDIES on the production of experimental hypertension by means of renal ischemia aroused clinical interest in hypertension of renal vascular origin.[1] Many patients with hypertension and unilateral renal disease underwent nephrectomy, but the results were unpredictable and unsatisfactory. More recently, with the development of angiographic techniques for studying the renal arteries, hypertensive patients with renal artery occlusive disease can be subjected to operation with predictable and satisfactory results.[2]

Obstructive lesions of the renal artery or its major branches are probably the most common remediable cause of hypertension, surpassing pheochromocytoma, coarctation of the aorta, Cushing's Syndrome or primary hyperaldosteroism. In 1959 Poutasse[3] reported that of 337 hypertensive patients selected for renal arteriography, 87 (26 per cent) were found to have occlusive disease of one or both renal arteries and thus could be considered for surgical therapy.

*From Department of Surgery, VA Hospital and University of Oklahoma Medical Center, Oklahoma City.

Jerry M. Ingalls, M.D., who graduated from Duke University School of Medicine in 1958, is now taking a residency in General Surgery at the University of Oklahoma School of Medicine.

A graduate of George Washington University School of Medicine in 1956, David Deal Snyder, M.D., is now Senior Resident in Surgery at the University of Oklahoma School of Medicine.

Gilbert S. Campbell, M.D., who graduated from the University of Virginia School of Medicine in 1946, has been certified by the American Board of Surgery and the American Board of Thoracic Surgery. He is now Professor of Surgery at the University of Oklahoma School of Medicine.

Doctor Campbell holds memberships in the American Surgical Association, the Society of University Surgeons, the American Association for Thoracic Surgery and the American Physiological Society.

Case Report: R.L.M.

The patient, a 38-year-old white male, was admitted to Oklahoma City, Oklahoma Veterans Administration Hospital with a chief complaint of shortness of breath,

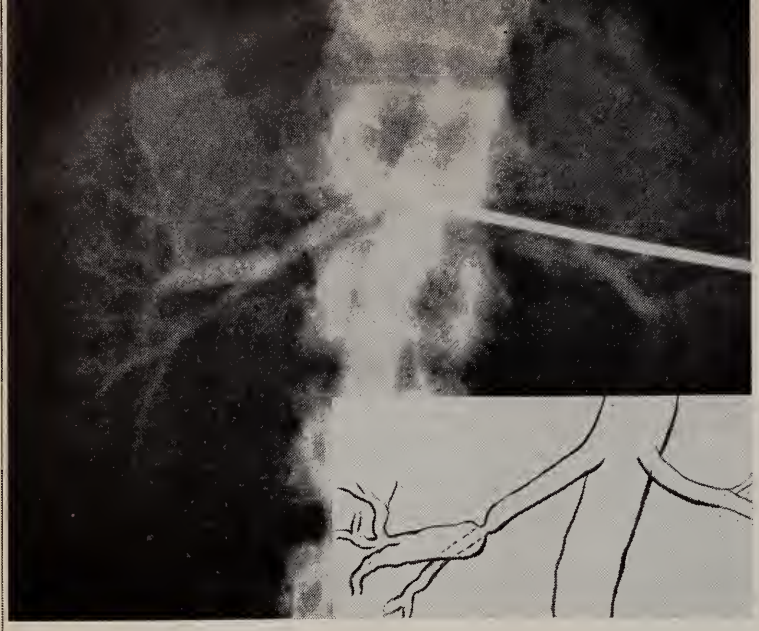


FIGURE 1

dyspnea on exertion, and paroxysmal nocturnal dyspnea for five months prior to his admission. Two months prior to this admission, the patient had experienced an episode of chest pain which lasted for approximately six days. One month prior to admission, the patient noted the onset of two pillow orthopnea with palpitation and occasional early morning throbbing headache with nausea. Accompanying this for several months prior to admission, he had noted paroxysms of increased nervousness, sweating, and flushing. The patient had noted no episodes of pedal edema, nor did he have any history of urinary tract infection. Past history is remarkable for the presence of hypertension, known for nine years prior to this admission. It should be emphasized that there was no previous history of renal disease. On physical examination, pertinent findings were: blood pressure in the right arm 190/130, left arm 174/110, left leg reported as 240/140 with a pulse rate of 100 per minute. Funduscopic examination revealed narrowing of the arterioles with minimal spasm. Examination of the heart revealed a prominent PMI in the left fifth intercostal space at the anterior axillary line. Sinus tachycardia was present but no murmurs were audible. All peripheral pulses were palpable and equal bilaterally. The lungs were clear. Examination of the abdomen revealed no palpable masses, organs, hernia, fluid, tenderness, or rebound. Examination of the extremities revealed no edema, cyanosis, clubbing, or malfunction. Laboratory data revealed a normal CBC and UA. PSP and creatinine clearance and concentration tests were within normal limits. Bilateral (split) renal excretion studies* showed a total sodium of 59 mEq/liter and a urine volume of 28 cc from the right kidney. The left kidney excreted a total sodium of 270 mEq/liter and a urine volume of 245 cc. Urine culture was negative. Indolacetic Acid, cold pressor, regitine and histamine tests revealed no abnormality. BUN was 30 mgm.%, total proteins 6.9 grams % with an albumin of 4.3 grams %.

PA and lateral of chest revealed the heart to be moderately enlarged in its transverse diameter with a left ventricular prominence. EKG showed left ventricular hypertrophy. IVP revealed both renal shadows to appear normal in size and position. Five minutes after IV administration of the contrast media, there was bilateral excretory function. A translumbar aortogram demonstrated a thin band-like constriction of the right renal artery 4 cm. from its aortic origin (figure 1). This band-like constriction was noted to narrow the artery to less than one-half of its lumen. A post-stenotic dilatation of the superior branch of the renal artery was present. The left renal artery appeared normal. The more distal aorta and iliacs opacified and appeared of normal caliber. Operative correction was recommended. Operation confirmed the x-ray diagnosis of a narrow constrictive band at the bifurcation of the right renal artery. The renal artery appeared normal both proximal and distal to the occlusion. The artery was incised longitudinally at the constricted area and a dacron patch graft was inserted. At the time of operation direct pressure measurements showed the pulse pressure in the right renal artery proximal to the constriction to be 25-40 mm. of mercury. Distal to this constriction, pulse pressure was 0-10 mm. mercury and after correction, the pulse pressure distally was 25-35 mm. mercury (see figure 2). Following the surgical procedure, the patient's blood pressure fell to an average of 140/90 mm. of mercury with remission of hypertensive symptoms. Postoperatively, an aortogram revealed a small amount of

*Performed by B. J. Limes, M.D., Department of Urology.

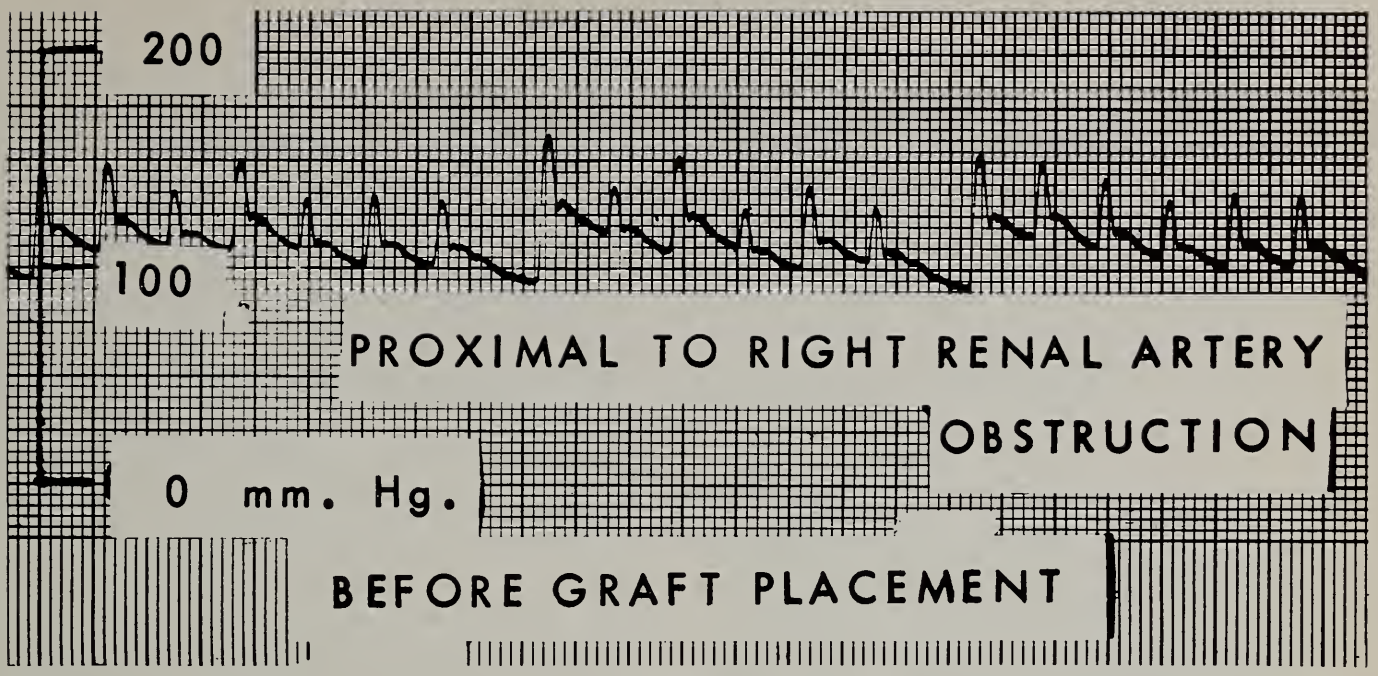


FIGURE 2-A

contrast media opacifying both renal arteries and their branches. No post-stenotic dilation was present and the site of the constriction was now noted to be of normal width.

Discussion

The ideal therapy of renal artery stenosis is preservation of renal tissue and reduction of hypertension by means of renal revascularization. With the onset of the renal artery occlusion there is a fall in the arterial pulse pressure in the ischemic kidney. This is thought to cause release of the proteolytic

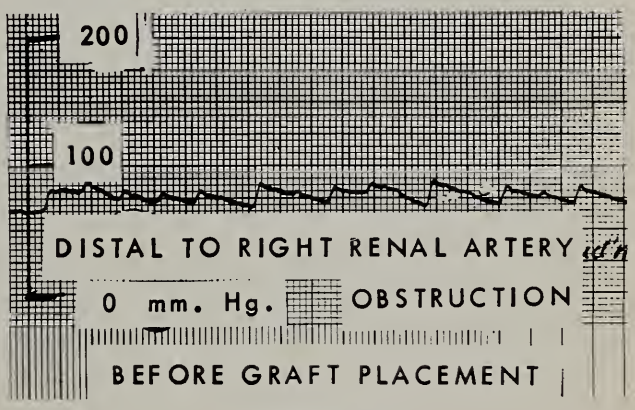


FIGURE 2-B

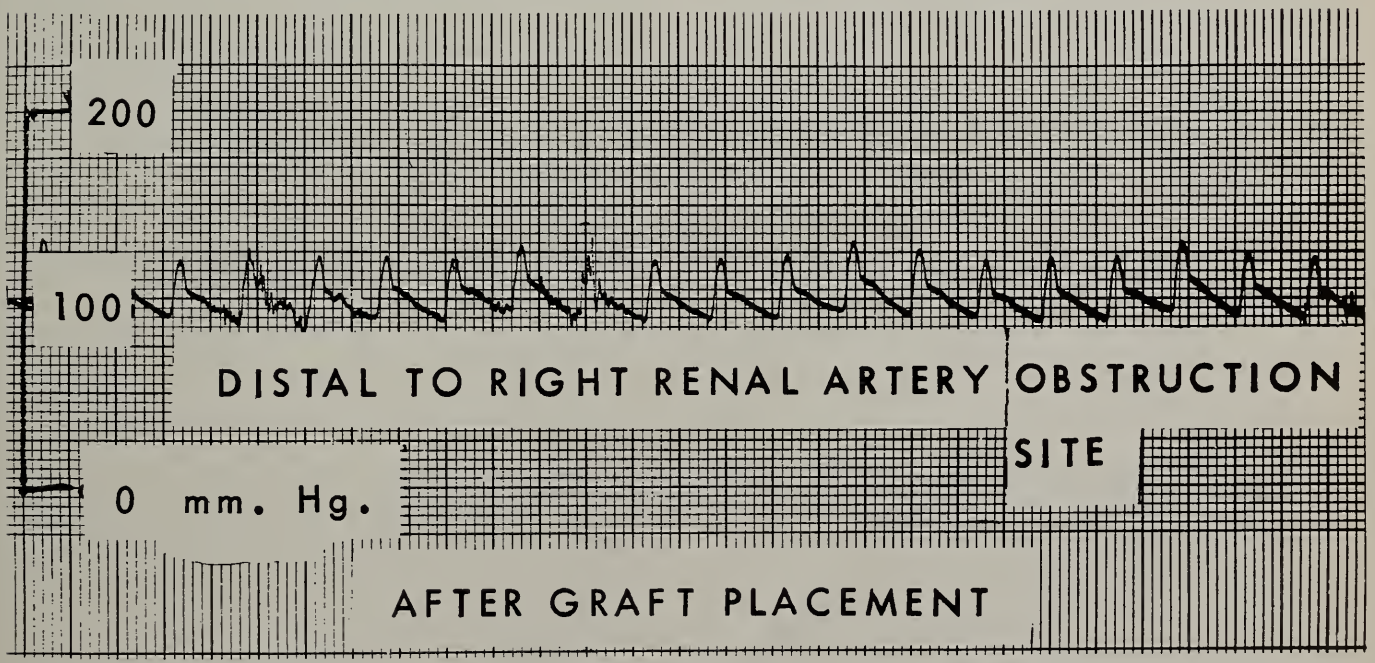


FIGURE 2-C

enzyme, renin, from the ischemic kidney. Renin acts on a protein substrate in the liver, causing the conversion of this decapeptide into an octapeptide (angiotensin) which is the active vasopressor substance. Due to the protective function of the arterial occlusion initiating the above process, the arterial bed of the kidney on the obstructed side is protected from the increased pressure. The unobstructed kidney, subjected to hypertensive pressures, develops renal vascular changes and functional impairment. Hence, by means of revascularization, hypertension is corrected, as blood flow to the "protected" renal parenchyma is restored. Therefore after a successful renal revascularization procedure the patient has regained maximal use of the more normal kidney.

The surgical procedures utilized in revascularization are numerous and each still possesses its proponents and opponents. The methods utilized are (1) bypass graft with synthetic material, (2) insertion of patch graft at the point of stenosis, (3) endarterectomy, (4) autograft, e.g., by use of splenic artery with an end-to-end or end-to-side anastomosis to the renal artery distal to point of stricture.

Due to the nature and location of this lesion we inserted a patch graft at the site of stenosis.

Certain points in a patient's history are suggestive of renal artery stenosis[3, 4] and these may be listed as follows:

1. Hypertension under age of 35.
2. Moderate hypertension which suddenly gets worse.
3. Malignant hypertension in a patient 55 years or older.
4. Nonfamilial hypertension of recent origin with rapid progression into the malignant phase.
5. Hypertension which develops or becomes worse following an attack of flank pain—which may represent a renal infarction.
6. Disparity in size or excretory function of IVP—a difference of 1 cm or more in the long axis of the two kidneys may represent renal atrophy; a lag in appearance of the radiographic media especially in the five minute film indicates a difference in excretory function.

Summary and Conclusions

1. Occlusive disease of the renal artery or its major branches is the most frequent cause of remediable renal hypertension.
2. The ideal therapy in patients with renal artery stenosis is salvage of the kidney and reduction of hypertension by renal revascularization.
3. By means of renal arteriography an absolute diagnosis of hypertension from renal artery stenosis can be made.

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An appraisal by a seasoned and sincere thinker. Read it aloud.

Congenital Malformations; A Medical and Social Challenge*

JAMES L. WILSON, M.D.

A graduate of Harvard, the author is Chairman of the Department of Pediatrics and Communicable Diseases at the University of Michigan. He is a member of the American Pediatric Society, the Society for Pediatric Research (Emeritus) and the American Academy of Pediatrics.

THE IMPORTANCE of congenital anomalies in the practice of everyday medicine is increasing. The reasons for our increasing attention to them are easy to see. One is an increasing demand by the public that we help them with any complaint. The well advertised advances in medicine and surgery in every popular magazine does and should make our people more demanding. It brings hope to people who previously would have had no idea that anything could be done to correct or prevent their tragedies, often more hope than is at all justifiable, but with this hope a challenge that a physician cannot ignore. Another reason for our present emphasis on the importance of birth defects is the great reduction in mortality and morbidity of other diseases, most importantly, infections and nutritional diseases. The most encouraging and happy reason for the increased attention to this phase is the great advances in therapy, of which the most dramatic, though not most fundamental, are surgical.

In our increased interest in these problems of birth defects, one apparently logical step is first to determine how many congenital anomalies there are, how frequent they are on some familiar statistical basis. This is very difficult to do and efforts to be complete and accurate would be bound to be futile. We have first to define congenital anomalies and if we do it broadly enough we could easily say that no one of us is here who does not have a congenital anomaly. We can go further and philosophize that the different reactions to disease, the varying susceptibility to disease which we see in such a puzzling way in our patients, where one is damaged and one is undamaged by a similar illness, may be due to congenital variations in "constitution," whatever that is. Noxious influences during intrauterine life influencing chromosomal developmental status may importantly influence our responses to disease. We will be hard put to it to quantitate congenital defects so broadly defined.

We can determine the incidence of congenital malformations that are grossly handicapping, but here again we would have to depend upon pretty arbitrary definitions and often we would have to wait for some years before we could be sure that some of the more subtle but very important diseases of congenital origin, present at birth, do not exist.

In the past, both physicians and medical lay people have looked on diseases of congenital or genetic origin on the one hand, and of postnatal origin on the other, as distinct categories of human ills. The concept of a newborn baby with a gross anatomical abnormality as a "monster," an act of God beyond our control or understanding has dominated our thinking about all diseases not acquired after birth or clearly at the time of birth.

*Presented at the Symposium on Congenital Malformations, January 25 and 26, 1961 at the University of Oklahoma Medical Center.

As you have heard from several points of view today, we must all rearrange our ideas and think of our human kind from before conception as an ovum or sperm, to old age, as being subject to pathologic influences which may result in what we can recognize sooner or later as disease, and can only wonder that it seems so seldom to happen.

Acquired disease in intrauterine life has been beyond our ability to examine, to diagnose, or to detect, until the moment of birth. This handicap still exists. The concept that the chromosome itself may be changed by pathologic effects, even temporarily, is a new one. The concept that intrauterine disease itself is often a complex of some noxious influence on a genetically susceptible individual, is a relatively new one. The old idea of prenatal emotional influences, such as the effect on the fetus of the mother being shocked by a snake, has long been abandoned, but in a way we may have to come around to a modified conception of this again and consider that any experience in the mother that would affect her chemical or hormone equilibrium, might conceivably influence the development of the fetus at certain critical stages in its development.

The concept of a congenital, "born with," abnormality as being only an anatomical defect has to be broadened, and we find we are even more interested in inborn defects of the enzymes and in so-called molecular disease, subtle changes in the body's control of metabolism which are just as truly congenital as a hare lip or a meningocele, and surely as truly a defect.

There are almost fifty abnormalities of the kidney which may be present at birth, overlapping in their characteristics but involving minute defects of various types of kidney function. Except for classifying and reclassifying them with men's names attached to them as clinical entities we haven't made much progress, either in prevention or in correction. We could go on and list scores of recognized chemical congenital abnormalities which cry out for remedial effects but there is little point of it. Our textbooks of pediatrics are becoming more and more occupied with the delineation of these conditions, mostly on the basis of clinical descriptions.

Another condition, glycogen storage disease, is a good illustration of a condition which surely should be identified as a specific enzyme defect, where sugar is deposited in the liver as glycogen but cannot be remobilized. We can help these patients, some quite a lot, but again, we are not near the exact delineation of the problem to say nothing of correcting it.

It would be impossible to take time or space to list here all the progress in prevention and treatment of various types of congenital anomalies. For the most part, advances in medical science in prevention still lie entirely ahead of us. In treatment we can take pride in many effective steps, though we can mention only a few, the most dramatic being surgical. The correction of tracheo-esophageal fistula and esophageal obstruction will certainly be remembered as one of the great triumphs of thoracic surgery in infants which really led towards other even more dramatic procedures, now routine in open heart surgery. These are now well known but it would have seemed almost unbelievable only a few years ago.

In purely medical areas we have less to admire. We must remember the congenital chemical abnormalities that face us which are crying for help and will almost certainly be remediable at some time. Cystic fibrosis of the pancreas is now almost the commonest cause of chronic lung disease in small children. A few years ago it was not even known, was entirely lost amongst the far greater number of chronic suppurative lungs from pyogenic infections. We have learned to do much for the nutritional care of these children and some for their lung conditions, but we have not begun to approach the fundamental condition which is something related to the abnormal function of the exocrine glands.

Several medical experiences have led us to think that we might detect many preventable causes of intrauterine disease which lead to malformations and thus take effective action against them. Two rather exciting and promising incidences are (1) the natural human experiment first reported

from Australia of the ill effect of German measles in the mother on her fetus, and the other (2) the great number of experiments on animals in which the pregnant beast is subjected to various annoying influences, generally through dietary deprivation, with the result that predictable abnormalities in the offspring can be obtained which are similar to human congenital defects.

Both these experiences have encouraged us to think that we can find another "German measles," a virus infection, or a nutritional defect, perhaps trivial in its affect on the mother but devastating to the fetus, that we could prevent. So far we have been disappointed, though we have by no means exhausted further study, and it still seems unlikely that German measles, alone of the scores of identifiable pathogenic viruses, is the only one that can just nicely escape killing the fetus and yet critically damage it at a crucial time in its development. At this moment we are left with no practical steps to prevent any such effects, if they exist, except those of German measles.

The studies of experimental teratology in animals have made us believe that nutritional defects in the mother, which might be preventable, could explain some of the abnormalities. In the acute human experiments in the areas of nutritional deprivation during the German occupation in Europe, instead of finding an increase in congenital anomalies, we simply find a decrease in fertility and birth rate. We are in a way disappointed that we cannot find that severe or mild nutritional defects, deprivation of certain vitamins or amino acids, which in experimental animals lead to congenital anomalies similar to those that so concern us in our children, do not clearly cause such human diseases so that we could prevent them. But again, this field of research has not been exhausted and still we may learn something that we as physicians can do something about.

Sometimes real advances in medical care and knowledge of pathogenesis of disease are hard to apply effectively for direct patient aid, even though they are not very expensive. There are certain public health procedures in prevention of mental defects of congenital origin that we could carry out more extensively with more organization. I will mention three diseases which we cannot prevent but whose ill effects on the development of the brain we can prevent with early diagnosis.

One is the fascinating "molecular disease," if you please, phenylketonuria, which results in an important, though small, per cent of our mentally defective individuals in the country. Here is a disease which, if diagnosed at birth or soon afterwards, can be so treated that the mental defect, which seems the important ill result, can be prevented. The diagnosis depends upon a five cent, as it were, laboratory test, but one that must be carried out at the right time and for 10,000 individuals in order for us to detect one case to treat.

Our old acquaintance, cretinism, is another example. Here again we have an important cause of mental deficiency. We believe that if it is diagnosed very early the mental deficiency can be prevented, at least we are sure it will not be as bad. How can we diagnose it very early? Actually, if we could carry out a ten dollar laboratory test on the blood of every baby, a month or so after birth, we could prevent much of the mental deficiency from this cause. Since we can't do that, if we carried it out on every baby about which we had any worry whatsoever, conceivably we could eliminate or enormously reduce the results of mental deficiency due to this defect.

A third one, galactosuria, which has other ill effects than on the brain, can also be prevented if a simple urine analysis, done early in life and properly interpreted, can be followed by a preventive dietary regime.

We must expect that the greater attention to congenital malformations in the practice of medicine will have an affect on our whole medical economy. Increased cost of medical care results from incomplete corrections of abnormalities, from incomplete cures, if you please. A few years ago our sick infant wards were filled for the most part with infections, or diarrheal disease of uncertain etiology. Now, quite different conditions busy us. Even a common city hospital with no special referrals of complex problems, may have 50% of its sick infants there be-

cause of congenital abnormalities, and in a referral teaching hospital this may go as high as 90%. Whatever data may be collected, there is no question but the problems of birth defects will increasingly dominate the list of unsolved medical problems and will equal cancer and degenerative diseases in importance.

We might compare the affect on total medical economy of diseases with different possibilities of correction. The hare lip and cleft palate, for instance, a traditional and well known defect, is nearly completely corrected at the time of the specific surgery indicated. Of course, if it isn't done at the right time there may be further medical problems and there are always some psychological and speech training problems, but as a whole these patients are pretty successfully handled once and for all, and are not great additional burdens on us after the corrective procedure has been applied.

On the other hand, let us study the marvelous attempts at repair work that we are now undertaking in cardiac surgery, and its affect on total medical care. We are intensely proud of these advances in medicine. However, often we are simply converting one congenital anomaly into another, even though a less incapacitating one; and the worry about follow-up care, of secondary endocarditis, of mid-aged myocardial failure, is still unresolved. Often even the efficiency of the heart is not completely returned to normal and only some improvement is made which prolongs a life, inevitably demanding more and more medical care.

We are certainly impressed by the same problem in the correction of hydrocephalus and the various forms of myelodysplasia. We are pleased, but not satisfied by the advances made in the prevention of progressive hydrocephalus. Here we often may be saving a life, one still to be burdened with medical problems, one which a few years ago would have soon ended in death and at that time ended the medical problems.

We can foresee progress in remedial treatment for many other gross anomalies, but we do not foresee in pediatric hospitals any great reduction in the number of necessary hospital beds, and we can well see that further advances in therapeutic medicine will paradoxically increase rather than diminish the amount of medical care that will later be necessary. Every life saved, besides being a medical triumph may well be a persistent medical problem, perhaps of maximum severity.

An additional problem, well illustrated in hydrocephalus but found in other conditions, is that in our eagerness to save intelligence and life, to carry out rather elaborate corrective procedures early, we may carry them out unnecessarily. The determination of progressing hydrocephalus is not always easy, especially early in its course, and already we are seeing unnecessary and harmful procedures carried out because of a false conception of the indications for radical surgery. Our knowledge of the variation from normal in the size of the head and the details of the characteristics of increasing macrocephalus is absolutely essential for good medical care. The correct diagnosis may be more difficult than the surgical procedure indicated.

The cost to the public and to the individual of survival with a brain deficiency needs no discussion. We can well consider such a phrase as the "risk of medical care." In a country, however, where we will not accept the idea of active euthanasia, we will equally well object to passive euthanasia where we sit in judgment and deny a remedial program to an individual because we expect the individual will still be grossly handicapped.

It is interesting to contemplate the overlapping effects of basic research directed toward one end, on the understanding of secondary, but just as important, ends. The vast study of the nature of viruses, accelerated by tissue culture techniques and directed toward the prevention of poliomyelitis, has even more importantly increased our knowledge of genetics, of molecular abnormalities, and thus of congenital defects. Thus, many of the activities supported for the understanding and prevention of poliomyelitis could be equally well justified for the prevention of cancer and birth defects.

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Do carcinoma of the larynx and bronchogenic carcinoma have common etiologies? If so, why are they not seen more often in the same patient simultaneously?

Concurrent or Subsequent Carcinoma of the Larynx and Bronchus

ROBERT B. BROWNELL, M.D.

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THE PURPOSE of this paper is to call attention to the occurrence of multiple primary carcinomas, with emphasis on primary carcinoma of the larynx and bronchus, to enumerate the modes of diagnosis and treatment, and to state briefly the rationale for therapy.

The day has now passed when a clinician can become excited about diagnosing the existence of multiple primary carcinomas. Gone is the concept that these are biologic accidents or medical curiosities. Since Billroth described the first cases of multiple primary malignant tumors in 1879, other clinicians have added data to the literature indicating that these are by no means rarities. Although Billroth's description of multiple primary malignant tumors as involving separate organs, being of different histologic types, and each producing its own metastases, was too strict, we now have a more liberal and realistic acceptance of such cases, proving that their incidence is much greater than formerly thought. On the basis of American statistics obtained from autopsy material, the frequency of multiple malignancy in cancer cases is 3.9%; it is felt by most investigators that this is a conservative figure. Multiple malignant tumore occur more frequently than can be explained on the basis of chance. In fact, in their series, Warren and Gates felt that the chances of a person developing a second malignant primary carcinoma, were eleven times greater than for a cancer-free individual to develop his first primary malignant carcinoma. This may be explained by a predisposition or susceptibility to cancer in certain persons, or the action of some factor favoring the development of malignancy. It was also shown that multiple cancers occur at the same age as single cancers.

Multiple tumors of the respiratory tract are uncommon with the exception of benign papillomas which may undergo malignant changes. This contrasts with the frequent occurrence of multiple urinary tract and alimentary tract neoplasms. However, Lewis and Schaff report 12 cases of carcinoma of the larynx with co-existing or subsequent carcinoma of the lung between the years 1950 and 1955. In one patient who had been treated by irradiation, an adenocarcinoma of the left upper lobe bronchus was found 17 years later by chest x-ray and bronchoscopy with biopsy. Pneumonectomy was performed and the patient recovered. Another case

of a white male with chronic cough for 20 years was described in which a chest film showed an infiltrative lesion in the left upper lobe. Endoscopy disclosed a Grade III squamous cell carcinoma of the larynx and thoracotomy disclosed a transitional type carcinoma of the left upper lobe with mediastinal involvement. This illustrates the simultaneous occurrence of malignant tumor in the two sites under discussion, being of different histologic types.

Thompson and Schaff reviewed a series of 20 cases of carcinoma of the larynx which came to autopsy. Five of the patients were found to have developed concurrent or subsequent carcinoma of the bronchus. These were white men, ages 52 to 73 years, and all were cigarette smokers. In three of the cases, the bronchogenic carcinoma was diagnosed concurrently or within a short time of the laryngeal carcinoma. In one case, the laryngeal tumor preceded the bronchial tumor by seven months; in another by seven years. In all these cases, multiple visceral metastases were discovered.

Two cases of associated laryngeal and bronchial carcinoma treated at the Oklahoma City Veteran's Administration Hospital and at Wesley Hospital are presented:

J.B.W., a 51-year-old white male, was admitted in September, 1958, with complaints of hoarseness and dysphagia. A biopsy of a lesion involving the right true and false cords showed Grade II squamous cell carcinoma. A total laryngectomy and right radical neck dissection was performed. The postoperative course was uneventful and the patient developed an excellent esophageal speech. He was re-admitted exactly one year later complaining of cough, blood streaked sputum and right chest pain relieved by narcotics. Bronchoscopy failed to demonstrate a lesion, but culture of bronchial washings grew Pseudomonas aeruginosa and cytology was reported as showing atypical cells, questionably malignant. Roentgenograms of the chest demonstrated an oval infiltrate in the periphery of the upper half of the right lung. This was interpreted as being an inflammatory process with moderate atelectasis. On subsequent films, this process seemed to be resolving somewhat. Throughout the admission there was no hemoptysis, the cough was controlled with elixir of terpin hydrate, and the chest pain disappeared. However, on using esophageal speech, the patient complained of nausea and developed some pallor of the skin. On the thirty-sixth hospital day, at 1:25 a.m., he was heard suctioning himself and was found having a massive hemorrhage from his tracheal stoma. He expired immediately. Postmortem examination revealed a small primary carcinoma of the upper surface of the right main-stem bronchus. There was massive metastasis of the bronchogenic carcinoma to the pancreas, adrenals, liver and heart.

T.R.S., a 67-year-old white male was referred to the Oklahoma City Clinic in July, 1959, with a five-month history of sore throat. Direct laryngoscopy and biopsy revealed a 3 cm. x 4 cm. ulcerated mass in the posterior laryngopharynx, which was a squamous cell carcinoma. Laryngeal crepitus was absent and a small, non-tender lymph node was palpated in the left carotid triangle. A routine film of the chest demonstrated an infiltrating process from just below the right hilum to the base. Bronchial washings taken at bronchoscopy revealed clusters of anaplastic epithelial cells. On July 28, 1959, a right thoracotomy was performed. A 2 x 3 x 4 cm. mottled mass was attached to the posterior surface of the right main stem bronchus. Several hilar nodes appeared enlarged. Pathologic report showed Grade II carcinoma of the bronchus, infiltrative. The patient expired on the fourth post-operative day, due to myocardial infarction. In this case, the two carcinomas were diagnosed concurrently, and the more serious one received the first surgical attack. Unfortunately, the patient expired from unrelated causes before the second lesion could be treated.

Since carcinoma of the larynx rarely metastasizes below the clavicles, the onset of pulmonary symptoms or the appearance of asymptomatic x-ray shadow with the configuration of bronchogenic carcinoma should be followed with careful and complete clinical and laboratory examination. A complete history of the patient should include contact with inhalant irritants including smoking and a family history of malignant tumors.

Physical examination may be unrewarding until cough and hemoptysis direct the attention to a bronchogenic carcinoma.

Roentgenograms of the chest are invaluable and should be obtained at six months intervals as part of the follow-up examination. They frequently point to a suspicious lesion before it can produce symptoms, thus increasing the likelihood of resectability. The presence of a typical shadow with atelectasis of one or more segments suggests the presence of primary tumor rather than metastasis. Comparing current films may be an aid in diagnosing an unrecognized shadow. Also chest tomograms may reveal bronchial changes if atelectasis has not yet occurred. Bronchoscopy with biopsy or aspiration of secretions for examination by the Papanicolaou method, may reveal the nature of the tumor in certain cases. Exfoliative cytology, however, gives very little information in metastatic lung lesions as the material is quite scanty. Then, open thoracotomy may be required to get aspiration biopsy, frozen section biopsy, or exploration of the extent of the tumor. It is much more difficult, however, to distinguish solitary peripheral lesions from metastatic lesions.

The treatment of synchronous carcinoma of the larynx and bronchus involves a surgical attack on the more serious lesion. This nearly always indicates thoracotomy and pneumonectomy or lobectomy and perhaps post-operative irradiation. A tracheotomy should be performed before the thoracotomy is done for the purpose of administering an anesthetic. Intubation through a malignant tumor of the larynx may result in implantation of tumor in the trachea or bronchi. After recovery from this procedure the appropriate laryngeal therapy is achieved, be it laryngofissure, irradiation, laryngectomy or laryngectomy with combined en-bloc radical neck dissection.

Discussion

The relationship of associated laryngeal and bronchial carcinoma must be further elucidated by clinical studies to determine what etiologies they have in common. If inhalant irritants are common to these two conditions, then why are they not found to be co-existant more frequently? Perhaps one answer to this question is the fact that patients with laryngeal carcinoma on coming to a post-mortem examination may be found to have bronchial carcinoma. On the other hand, patients succumbing to bronchial carcinoma and examined post-mortem, may not be found to have laryngeal carcinoma, either intrinsic or extrinsic, because a study of the larynx is not included in the routine autopsy. This answer may be partially refuted by the fact that carcinomas of the larynx are usually symptomatic and demand clinical investigation.

Patients with laryngeal carcinomas, seen for post-treatment examination should be followed closely for development of bronchial carcinoma. If one is found, it should be regarded as a second primary lesion for the following reasons:

The time interval between lesions may be quite great, making metastasis unlikely.

Laryngeal carcinomas rarely metastasize to the lungs before saturating the cervical lymph nodes with tumor.

The two lesions may be different histologically.

Implants of tumor from the larynx into the bronchi are unlikely, due to the physiologic upward flow of the mucous blanket.

Metastasis of the larynx is quite rare and metastasis of bronchial carcinoma to the larynx has not been reported.

Therefore, if carcinomas of the larynx and bronchus are found in the same patient, they should be regarded as separate primary tumors and treated as such, not as metastases.

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The Present Status of Corrective Surgery for Congenital Heart Disease

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Beginning with the successful treatment of patent ductus arteriosus in 1938, of coarctation of the aorta in 1942, and of the tetralogy of Fallot in 1944, almost unbelievable strides have been made in the surgical treatment of congenital heart disease, due to the development of satisfactory pump oxygenator systems. It is conservative to say that cardiopulmonary bypass is an established and safe procedure which currently carries an extremely low mortality rate. The once controversial subjects of optimum flow rates, importance of pH changes, nature of gas mixtures and control of temperature, remain of physiologic interest, but practical answers are at hand. Use of bypass in very small infants remains a problem which is apparently being solved at present.

A review of the current status of surgical treatment of specific types of congenital heart disease is generally encouraging. Uncomplicated atrial and ventricular septal defects can be repaired with a mortality rate which compares favorably with that for uncomplicated gastric resections. Surgical relief of congenital stenosis of both aortic and pulmonic valves is accomplished with an even lower immediate mortality rate. The incidence of associated and probably acquired pulmonic infundibular stenosis in older patients with congenital valvular stenosis is a matter of surgical concern and perhaps adds an argument for earlier treatment of valvular stenosis. The great care necessary in the actual performance of aortic commissurotomy to prevent regurgitation has been learned at a disappointing price.

Treatment of tetralogy of Fallot by total correction is a less successful procedure. The necessity of using prosthetic materials in repairing the ventricular outflow tract, adds to the surgical risk. It is certainly true that many satisfactory results can be obtained but there is yet no reason for complacency. The group of complicated congenital defects, transposition, single ventricle, A-V communis, Ebstein's anomaly and tricuspid atresia remain formidable. Total correction of transposition has been reported, but an extremely high mortality rate remains. Reduction of pulmonary flow in defects associated with large left to right shunts is palliative only.

If further advances in this field equal those of the past few years, the problems mentioned in previous paragraphs will be solved. In the technique of bypass itself, it seems probable that the immediate future will bring improvement in the convenience of the technique, and will permit the establishment of a cardiopulmonary bypass system which should allow prolonged support of the failing heart or other organ systems.

The future of surgical endeavor in treating specific defects is difficult to predict. However, it seems likely that the future will bring a broadening of the indications for surgical correction of uncomplicated septal defects. The use of prosthetic valves can be predicted with some confidence. In the treatment of the tetralogy of Fallot the future will surely bring improvement of present technical methods for dealing with the pulmonary outflow tract. The problem of preliminary shunts and their advisability will be solved by prolonged experience by careful observers, but complicated intracardiac defects probably will continue to offer the greatest challenge in the field. Finally, what must be considered the ultimate in cardiac surgery, the transplantation of an entire heart, seems certain of eventual accomplishment.

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Message from the Dean

Recently, it was my privilege to attend a meeting of the Medical School Liaison Committee of the Oklahoma State Medical Association, and the thoughtful interest of the members was an inspiration and an encouragement to me. Serious, constructive discussion was given to some of the problems in which the medical profession and the medical school have a common interest.

During the 40 years that I have been engaged in medical education, my ideal has been that Medicine is of great stature and of noble purpose, and that the continuity and strength of the profession necessarily begins with the education of its future members. Moreover, the reason that medical education excells in this country is because of two things: the devotion of medical school teaching staffs and the support of medical education by the profession. No other profession has so succeeded in developing an educational program which not only presents the theoretical and scientific basis of its knowledge but also the efficient application of this ever-advancing knowledge to actual care and treatment of patients, for which the whole is designed.

Physicians have so many duties that one hesitates to suggest that they take yet another hour to champion medical education, but this facet of their professional life happens to be one of the greatest importance, for the interest of the profession, past and present, must be kept alive in the profession that is yet to be.

It is therefore a mark of distinction for the physician to be helpfully concerned with the goal of our medical school. Contrast a doctor who says he cannot be concerned because at some time he could not get a patient into the University Hospitals with the one who realizes that all who are interested in medicine are in the same company and need to support the best there is in medical teaching and research.

The immediate past-president of the Oklahoma State Medical Association, Doctor Walter E. Brown of Tulsa, has shown the finest spirit in this regard. I shall never forget his most courteous interest. He and many other good physician friends have realized that there are certain professional problems which only organized medicine can solve, and that these problems should not be confused with those which pertain purely to education.

A number of medical schools in surrounding states have in recent times received from $13 million to $17 million each to modernize their buildings and equipment. We differ in no respect in our needs. Many of our medical school alumni and other physicians in our state have devoted themselves to forwarding our Ten-Year Program of building improvements. Probably the full achievement of this goal will require time, so this effort needs the continuing help of every physician who has a real desire to advance the future profession of medicine in Oklahoma.

Mark R Everett

The Treatment of Gout and Its Complications*

JOHN H. TALBOTT, M.D.**

GOUT is a parent term used without reference to acute or chronic joint distress. Its use is justified in any individual who has suffered one or more attacks of acute gouty arthritis. The only demonstrable abnormality in such an individual between attacks may be an increased concentration of uric acid in the serum and other body fluids. If the prophylactic management as outlined later is adequate the incidence of acute attacks should be a minor clinical matter. This period between the attacks was identified formerly as the intercritical period. I now prefer the term prophylactic period. Chronic tophaceous gout is the fate of only a small number of patients. This is the late stage of the malady and several decades may elapse following the first attack before tophaceous changes appear. Fortunately this is the fate of but a small percentage of the afflicted. Gout is a familial malady, a feature that I have been especially interested in for a number of years. Approximately 20 per cent of all blood relatives of gouty patients will have a concentration of uric acid above 6 mg., as illustrated in figure 1. The transition from a normal concentration to the gouty range in these individuals probably occurs during adolescence. I am not particularly fond of the term gouty diathesis and use it only in relation to nonaffected members of gouty families.

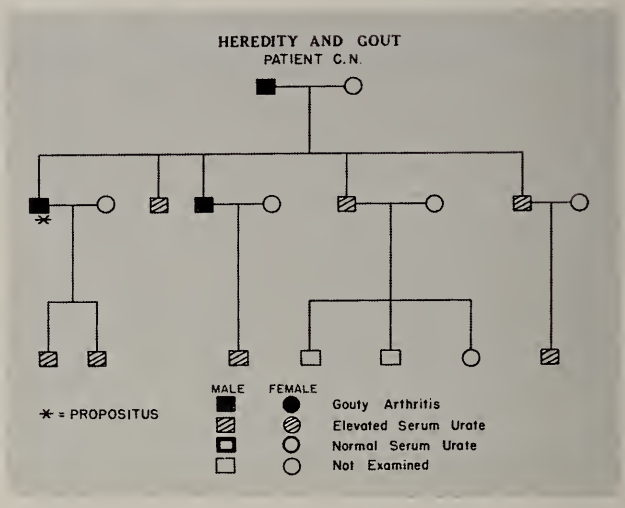


FIGURE 1

We are following a relatively large group of nonaffected relatives who have no stigma of the disease except for the increased concentration of uric acid in the serum. The increased concentration is a persistent observation, while the appearance subsequently of clinical manifestations of acute gout are observed infrequently. The probability is not more than one in ten that a nonaffected relative with an increased concentration of uric acid will develop acute articular symptoms over a score or more of years. Nor is any treatment believed to be justified until after the initial articular episode. We have never considered it wise to recommend the administration of Benemid or col-

*Presented at the Second Oklahoma Colloquy on Arthritis and Rheumatic Diseases.

**John H. Talbott, M.D., is Editor of the Journal of the American Medical Association.

chicine to nonaffected relatives prior to the initial attack. Because of the incidence of arteriosclerosis in gouty patients one might raise the question as to whether or not we should restore to normal the elevated uric acid levels and possibly inhibit the development of vascular sclerosis. This is highly theoretical and I take little stock in this possibility. The matter of arteriosclerosis will be mentioned later under treatment.

Gout has been observed in the several races throughout the world and may have a slightly higher incidence in the United States because of the high standard of living. This I am not at all convinced of. Although the Negro is by reputation presumed to be immune from gout there are a number of well-documented cases. Even families of gouty individuals have been reported among Negroes.

The three likely internal dysfunctions which might lead to an increased concentration of uric acid in the body fluids include diminished destruction, diminished excretion by the kidney and increased formation through a defect in intermediary metabolism. Increased formation of uric acid by the body, which leads to an increase in the size of the metabolic pool, is believed to be the most satisfactory explanation. The augmented metabolism and the increase in uric acid in body fluids need be but slight to account for the chemical findings in gout. Of course a similar statement might be made also regarding impaired excretion. An increased uric acid synthesis in gout has been demonstrated by isotope studies, utilizing glycine labeled with heavy nitrogen. The increased incorporation of glycine was found originally in a few patients only. Wyngaarden, utilizing glycine labeled with heavy carbon, has reported the phenomenon in all gouty patients studied by him.

The isotope techniques have been helpful in yet another category of the problem, *i.e.*, in clarifying the position of dietary foodstuffs as precursors of uric acid. Uric acid is the end product of metabolism of purine substances in humans, while urea is the end product of the nitrogenous substances of amino acids and pyrimidine origin. If we refer to the structural formula of uric acid, it is apparent that a number of simple biologic substances may provide essential ingredients to the uric acid molecule. Since some of the simpler biologic substances such as carbon dioxide, formic acid, glycine, and lactate may contribute a nitrogen or carbon atom to the uric acid molecule in the intermediary metabolism of this substance of the body, is not it wishful thinking to hope that rigid restriction of proteins will correct the metabolic disturbance?

A number of precipitating agents have been implicated in the acute articular episode. Recognition of them is of practical significance and should be appreciated by the patient and physician. Overindulgence in rich food and alcohol occupy prominent positions in the older literature. I believe that there is no satisfactory evidence that specific factors in any of these categories are intimately responsible for the acute episode. The insult to the body is believed to be general. Even high purine foods sometimes fail to incite an acute attack and are not particularly reliable as provocative agents in the diagnosis of the malady. There are other items that have a closer relationship to acute gout. These include drugs, local injury, acute infections, blood loss and surgical operations Parenteral penicillin should be prescribed to gouty patients only if there are sound clinical indications. Parenteral vitamins, insulin, mercurial diuretics and ergotamine tartrate have been implicated also. Poorly fitting shoes and gloves may cause sufficient irritation to precipitate an acute attack. The precipitation of acute gout by a surgical procedure, minor or major, is of sufficient importance to warrant attention to the administration of antigout agents and prophylaxis preceding planned surgical intervention. Weather, exposure to the elements and other poorly defined items may be classed as general inciting agents, not specific.

The mechanism of the acute articular episode is not understood. The infiltration of joint structures by urates most likely precedes the acute symptoms. Once joint structures have been invaded they are never immune to an acute attack. Increased precipitation of urate crystals preceding or during an acute attack may occur but this has not

been proved. The polyarticular nature of many of the acute attacks suggest that a systemic disturbance rather than an exclusively local one is responsible for the acute bout.

An acute attack of articular distress in one or more of the peripheral joints usually is the first sign of gout and the diagnosis probably should not have been entertained seriously until after this event. There are symptoms or isolated observations, however, that may precede the characteristic articular findings, and if identified might be interpreted as precursors of articular gout. Albuminuria, elevation of blood pressure and the passage of uric acid gravel as a kidney stone, respectively, have been noted before the first articular attack. There are several patients in our series who have passed a renal stone, in some instances a decade before the onset of articular gout. This is not surprising since one patient in seven with clinical gout will pass a renal stone one or more times in the natural history of the disease. Albuminuria and hypertension are present in a significant number of patients with classical gout. If such ancillary features are observed in some patients after the initial articular episode, the mechanism responsible for such might be operating in isolated instances before the first attack.

The typical onset of acute gout is sudden and may appear at any time of the day or night in any season of the year. The metatarsal-phalangeal joint of the great toe usually is afflicted but other peripheral joints of the upper or lower extremities may be involved. An acute elbow, a knee or a wrist may be the site of the initial episode and unless gout is considered the patient is denied prompt and proper treatment of the complication. The pain suffered is excruciating and appears at times to be near the limit of endurance. Effusion into the joint space and edema of the surrounding soft tissues may cause intense agony and simullates severe inflammation. Maximal tenderness on lateral pressure may be detected. In addition to the usual joints, an acute attack of gout may develop in the bursa, a tendon or subcutaneous tophus. The systemic reaction to the acute process may be indistinguishable from that which accompanies

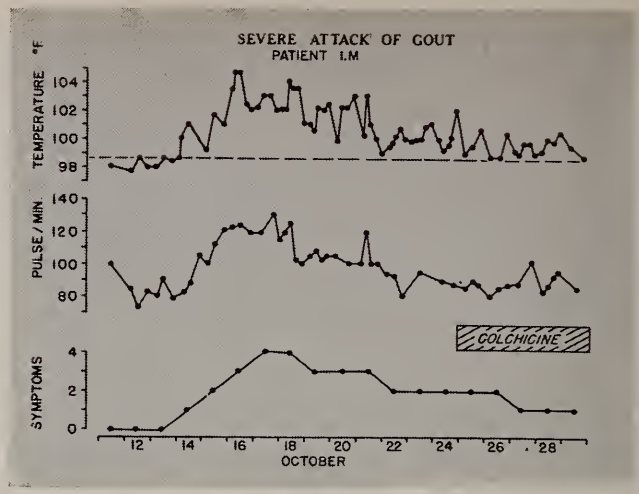


FIGURE 2

an acute infection including fever, chills, malaise, headaches, tachycardia and anorexia. The temperature may be as high as 104° F. with leukocytosis and an increase in the sedimentation rate (figure 2).

The duration of an acute attack is unpredictable if specific measures are not instituted. Symptoms may persist for only a few hours in a mild attack; in unusual instances, low grade symptoms may persist for several weeks. If an acute attack has persisted for several days, desquamation of the involved joint and surrounding skin may be noted after normal function has returned.

Restoration of function sometimes is delayed unnecessarily because of the reluctance of patients to use a joint recently affected, particularly if the joint is a weight bearing structure. I encourage patients to resume normal activity as soon as possible.

The interval between attacks varies considerably. Several years may elapse. In unusual instances, a score of years may separate the initial attacks. The frequency of attacks tend to be greater as the disease progresses in spite of the absence in many patients of clinical evidence of tophi. The majority experience a progression of the disease and are prone to suffer greater incapacity from acute gouty arthritis unless prophylactic therapy is followed. Between acute attacks, in patients without chronic articular changes, there are no subjective symptoms or objective findings.

Kidney involvement is the only critical complication. It is important to note that

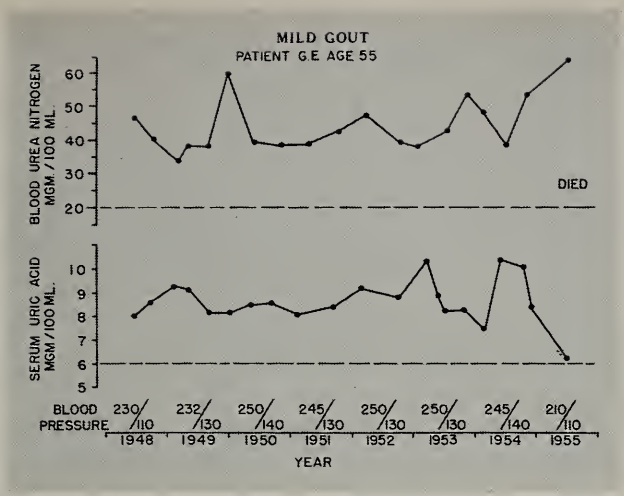


FIGURE 3

although a significant percentage of patients with gout will have laboratory evidence of renal disturbance, longevity is not impaired. Among the gouty patients that are now being followed in our clinic, almost 30 per cent show minor or major evidence of renal disturbance. Albuminuria and inability to concentrate maximally is the evidence. On the other hand, only a small number of patients has shown a persistant increase in the concentration of blood urea and only a few have died in uremia during the past decade (figure 3). The protracted course of renal dysfunction in gouty patients with demonstrable renal disease is noteworthy. The diagnosis of chronic nephritis might have been assumed if proper emphasis had not been given to the past history or clinical findings of gout. Nor is the diagnosis of chronic nephritis justified in most patients who have gout and die of renal insufficiency. I prefer to consider this as a complication of gout rather than the coexistence of gouty arthritis and chronic glomerulonephritis. The precipitation of urates in the tubules which cause mechanical or chemical irritation is a reasonable explanation for the albuminuria. The kidney having been insulted repeatedly from the precipitated urate is probably more susceptible to secondary processes as pyelitis, pyelonephritis and amyloidosis.

The diagnosis of gout rests upon clearly defined criteria which are not difficult to satisfy in the afflicted. If a patient, particularly a male, has acute joint distress every effort should be made to identify specifically the type of arthritis. I believe that the clinical characteristics of the acute attack are the most helpful of each of the several criteria in the diagnosis of gout. If I had one finding only upon which to render an opinion I would place the greatest reliance upon the clinical characteristics of the acute episode. When the patient is seen after subsidence of acute symptoms, it may be possible to have the patient recount accurate details sufficiently to provide reliable diagnostic data.

An increased concentration of serum uric acid is confirmatory but not diagnostic. There is ample evidence to support the statement that the concentration of uric acid in the serum in patients with gout, in the absence of any agent that aids in the elimination of uric acid in the body, is elevated (figure 4). The increased concentration in the serum precedes the acute attack, persists during the acute attack and is present after the attack. Unfortunately, the determination of uric acid presents technical difficulties in some biochemical laboratories that have not been resolved at the present time. Once a patient with gout reveals the telltale stigma of an increase of uric acid in the serum, this finding persists without exception save for the administration of drugs which affect this constituent. Most important is the questioning regarding the intake of anti-arthritic drugs on the days immediately preceding the collection of blood for the determination. The concentration in the serum may be within the normal range in a bona fide case of gout if anti-rheumatic agents such as salicylates, steroids or phenylbutazone have been taken in therapeutic quantities in the day or two preceding the collection of blood for the determination. Thus, it is our practice to withhold any anti-

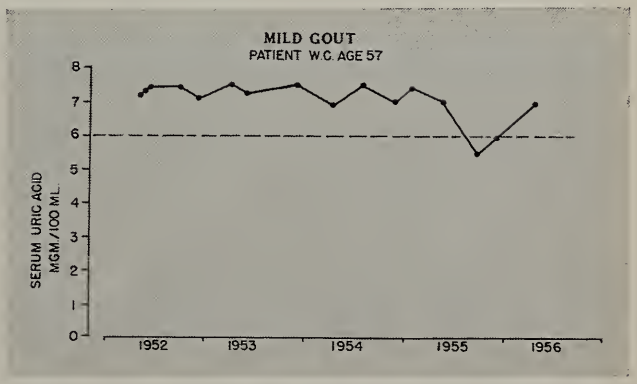


FIGURE 4

arthritic agent for a period of at least 48 hours before obtaining blood if a satisfactory pretreatment value is desired. It should be noted that colchicine is the only specific antigout agent and it has no effect upon the uric acid level in the serum.

More useful than the concentration of uric acid in the serum is the response to a full course of colchicine during the acute attack. Although this drug has been used for many centuries in the treatment of joint distress, it is specific for acute gout and has little or no effect upon other forms of acute articular distress. Most patients with acute gout respond to the full course as will be described below and the presumptive diagnosis is thereby strengthened materially. Salicylates, steroids and phenylbutazone are non-specific anti-rheumatic agents and are less useful, therefore, as a combined diagnostic and therapeutic guide.

There are two other items usually discussed in a consideration of the various diagnostic criteria, i.e., subcutaneous and osseous tophi. The urate tophus in the ear is the hallmark of gout but it appears in a small percentage of patients only. Although tophi may appear relatively early in the clinical course, their presence means well-developed gout and the diagnosis should have been made several years earlier. The Achilles tendon is another area prone to attract urate deposits in a moderately severe case of gout.

Roentgenographic evidence of gout in the bones of the extremities is well recognized. The characteristic findings are caused by replacement of normal cartilage and bone with sodium urate. Tophi must obtain considerable size, however, which involves years of slow precipitation before they are visible by x-ray. Hence, x-ray changes are not to be expected in the early years of articular distress. A number of patients may have a fairly long history of intermittent attacks and still present normal roentgenographic findings in the affected parts.

The management of gout and gouty arthritis involves a triple attack upon the metabolic malady. Fortunately each phase currently is susceptible to pharmacologic agents. The three phases are: 1. The acute articular episode; 2. The prevention of recurrence of acute attacks; and 3. The resorption of subcutaneous and osseous uric acid deposits. If a correct diagnosis has been made and gout is responsible for articular distress, proper treatment will be rewarding in the management of the acute articular episode as well as in the prophylactic handling and prevention of recurrences. Although gout is a chronic disease and the tendency to articular symptoms most likely will remain in each susceptible individual, irrespective of the efficacy of therapeutic agents, rich dividends may be anticipated in treatment.

The prophylactic regimen for the intercritical period will be discussed first because it is believed that prevention of acute attacks should take precedent. Although the acute episode is a miserable affair if allowed to reach full proportions, proper respect for the prophylactic regimen will reduce the incidence of acute attacks to clinical insignificance. The recommended schema is simple to follow, it permits the patient to live essentially a normal life and either stays or reverses the previously progressive effects of the disturbance of uric acid metabolism.

Management is concerned largely with the regular administration of two effective antigout agents, colchicine and Benemid (figure 5). Each one complements the other; neither one by itself is as effective as the combination. It is a good practice to recommend some colchicine regularly to each patient with gout. The practice has been followed for more than two decades; in recent years in conjunction with Benemid. If the malady is mild and the past history reveals that the patient has had not more than one attack

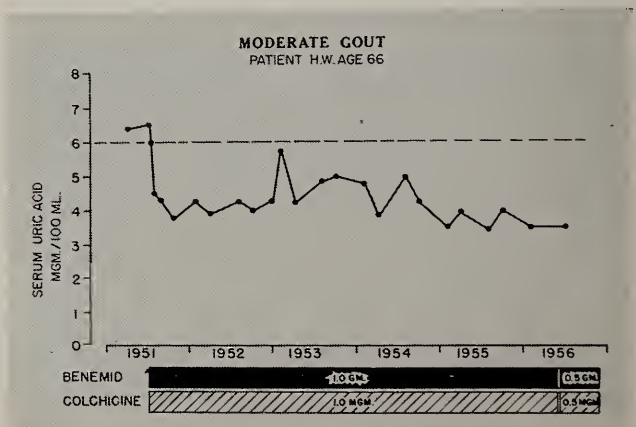


FIGURE 5

per year, one tablet of colchicine, 0.5 mg., is recommended in each of three days per week. Patients moderately afflicted should take one or two colchicine tablets each day of the year. The severely afflicted should take colchicine daily up to the point of gastro-intestinal tolerance. This may be two, three or even four tablets each 24 hours. The incidence of acute attacks is reduced significantly by the periodic use of colchicine. Tolerance does not develop to the drug and if an acute attack appears, a full course is maximally effective, irrespective of previous ingestion. Persons who have been on daily rations of colchicine for a decade or more, receive the optimum benefit from a full course when this is prescribed. Another obvious gain in the ingestion of colchicine regularly is the advantage of having started the course at the earliest possible moment should acute symptoms appear.

Prior to 1950, colchicine stood alone as the prophylactic drug for use in the intercritical period. Since that time Benemid has become available and the greater the experience with the combination the greater the reliance we place upon it. Benemid is an excellent agent for eliminating uric acid from the body and results in a concomitant decrease in the concentration of uric acid in the serum. The average dose of Benemid for persons moderately afflicted is 1 gm. daily. The severely afflicted, that is those with chronic tophaceous gout, take 1.5 or 2 gm. daily. If the level of uric acid in the serum is in the high gouty range 8-12 mg., the ultimate level on Benemid averages 6-8 mg.

The most important subjective evidence of the value of the combination of Benemid and colchicine is the diminution or elimination of acute attacks of gout. A majority of patients, irrespective of the severity of the disease, average less than one day per year of incapacity, as illustrated in figure 6. This represents a striking change from the incidence of acute attacks before beginning the combined therapy.

The action of Benemid is upon the tubular cells of the kidney and the function affected is reabsorption. With partial blocking of reabsorption, more urate is excreted in the urine than under normal circumstances. The drug is rapidly and effectively absorbed from the intestinal tract when taken orally and is carried in the blood stream partially bound to plasma proteins. The alteration upon uric acid metabolism is transient, however, and when the drug is stopped there is a prompt return of the serum concentration to the pre-Benemid level.

Most important is the low incidence of toxicity of these two drugs. We have never been forced to discontinue colchicine permanently on any patient with gout. If maintenance doses of colchicine appear to keep the large bowel too active, the dosage is reduced to the sub-irritation level. Several patients have chronic gastro-intestinal disturbances in addition to gout and are able to adhere to the prophylactic drugs satisfactorily. These patients either have a peptic ulcer, ulcerative colitis or chronic pancreatitis. Bone marrow depression has not been observed. However, there has been one instance reported of liver damage following sensitivity of Benemid. The incidence of renal stones is unaltered statistically. If gastro-intestinal distress appears it may be prevented by the ingestion of the drugs with meals. A few patients have developed a skin rash. This has been corrected by a course of desensitization together with an anti-histaminic. Most important in the prophylactic management is the insistence upon a high fluid intake. Since the solubility of uric acid in body fluids is near the critical level, any increased excretion of uric acid in the urine should be offset by an increased urine output.

The length of time that the patient should be on Benemid daily has not been determined. It is our prediction that patients with chronic tophaceous gout will continue on it indefinitely. Patients moderately afflicted have reverted to smaller doses in some instances, meanwhile maintaining colchicine regularly for articular prophylaxis. Diminution of the dose has not been recommended until after the prophylactic regimen has been continued for a minimum of two or three years. It is not believed that these drugs cure gout in the usual sense of the word. The presence of mild renal dysfunction is not a contraindication to the regular administration of these drugs.

We do not recommend Benemid without

colchicine. It is believed that the incidence of acute attacks would have been influenced eventually if Benemid had been ingested for one or more years. This approach seems to be to us less than ideal for it fails to take full advantage of the combined therapy.

General measures during prophylaxis include few prohibitions. There is meager evidence only that the alcoholic beverages consumed in moderation aggravate the metabolic disturbance. Most patients with gout are able to remain in a symptom-free state, meanwhile enjoying a temperate intake of alcohol, if this is their wish, and if the other antigout measures are respected. It is believed that the harm from alcohol comes primarily from the quantity consumed. Intemperance, as a general principle, is bad whether it concerns food or alcohol. A balanced diet is the rule. High purine substances only are prohibited. Obviously, if nitrogen retention is present protein should be restricted also. Out-of-door activities should be permitted, contingent upon general rather than specific rules.

One of the objective findings that follows Benemid therapy is the reduction in the size of subcutaneous and osseous tophi. If large subcutaneous tophi are observed it is our practice to remove them surgically, rather than to wait for Benemid to reduce them gradually. The cosmetic effect is achieved shortly after operation and the possible added load upon the kidneys in excreting the excess uric acid is obviated.

If proper attention is given to the prophylactic regimen the attacks of acute gout should be infrequent in incidence and mild in severity. Patient F. D. is an example (figure 6). In 1947 this patient, a member of a gouty family, was confined to bed for almost three months because of migratory gouty arthritis. He was placed on colchicine, 1 mg. daily and had two mild attacks each year until 1954. At that time Benemid, 1 gm. daily, was added to the prophylactic regimen. For almost four years now he has lost no time from work. This is an illustrative case and represents the experience among the majority of the patients on the prophylactic regimen.

The most valuable agent in the treatment

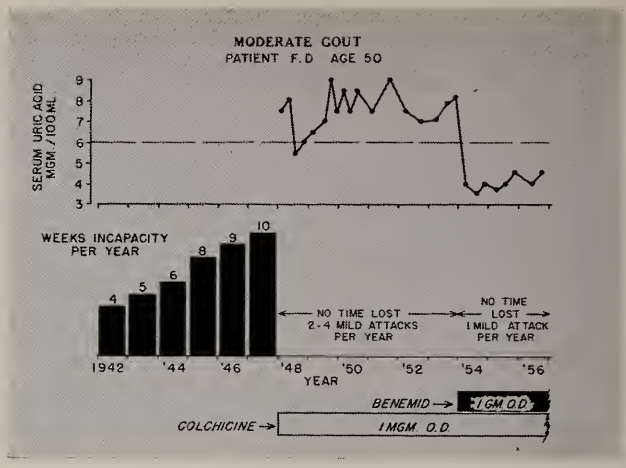


FIGURE 6

of the acute attack continues to be colchicine. This may be combined with phenylbutazone, ACTH or other steroids but has not been replaced by any preparation. The amount of colchicine prescribed should be based upon the severity of the acute attack. The subsidence of symptoms in the mild attack may follow the ingestion of not more than four or five single doses of chochicine. A moderate or severe attack may require a dozen tablets over a similar number of hours. The limiting factor is the onset of gastro-intestinal distress which is the signal for cessation of colchicine. The administration of colchicine in the first few minutes after onset of articular distress is most important and if there is a question regarding the development of acute articular gout the disease should receive the benefit of the doubt. Usually the acute distress in the joint or joints affected begins to subside near the close of the colchicine schedule. Hour by hour, thereafter, the joints become progressively less painful. Within 24 hours after beginning colchicine ingestion, significant improvement should be expected with the patient well on his way to recovery.

As an adjunct to colchicine, and in some instance to replace colchicine, several other preparations are now available. Each has merit, each has strong proponents in support of its use, but a proper respect regarding the value of each is sought.

Phenylbutazone is an effective anti-inflammatory and analgesic drug and is valuable but is not specific for acute gout. Some physicians recommend it as a sole drug for the treatment of the acute attack; others

recommend it in conjunction with colchicine. We use it only in the latter category. Because of toxicity, even the staunchest advocates of this drug advise caution in this respect. If ACTH is used from 60 to 80 units of the gel may be administered parenterally for two or three days.

Intravenous colchicine holds a limited but definite place in the treatment of the acute attack. The patient, however, should not be dependent upon intravenous administration which may delay effective treatment and impose an unnecessary burden upon a physician or a nurse. This route is indicated in instances where treatment has been inadequate by mouth or for other reasons has been poorly carried out. Post-operative gouty arthritis may appear in a patient who is unable to tolerate a full course of oral colchicine. At other times in selected individuals the intravenous route is preferred. It is my practice to administer 2 mg. of colchicine intravenously and repeat the dose every 8 hours as needed. The development of gastro-intestinal distress is less of a problem with similar doses given parenterally when a comparison is made with the oral route.

I am firmly convinced that the combination of colchicine and Benemid provides the most effective means of attacking the disturbance of uric acid metabolism available at the present time. Patients mildly or moderately afflicted lead normal lives in every major respect. Those with chronic deforming gouty arthritis may be handicapped to a limited degree but are not incapacitated. There are several patients in our series, either forced to retire prematurely or to pursue part-time jobs only to have resumed a full-time gainful occupation following the combined therapy. Not a single patient in our series has become permanently handicapped or crippled while on the regimen; not a single patient has been forced to restrict further his gainful activity.

The clinical results during the past few years are gratifying and I believe represent the most satisfactory treatment of any major type of joint disease. Not only is treatment satisfactory but the prevention of incapacity and the provision for normal living makes the disease a minor rather than major problem for the afflicted.

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Degenerative Arthritis*

WILLIAM K. ISHMAEL, M.D.
MARY DUFFY HONICK, M.D.
J. N. OWENS, JR., M.D.

A STRESS REACTION occurs in a musculoskeletal structure if it is driven beyond its physiologic capacity. This may be recognized as a sprain or strain, or the "stiffness" the day following unusual exercise. Should this reaction occur persistently, beyond the structure's ability to adapt (hypertrophy), a breaking down or degenerative process ensues, which if sufficiently accelerated, becomes proportionately painful. Thus a degenerative reaction may be created.

The speed and intensity of the traumatic force versus the ability of the structure to withstand the trauma coupled with the subject's willingness to stop the offending stress before his capacity has been exceeded, constitute the three contributing etiologic factors in this process. Hence, one would expect to find a significant portion of his patients with degenerative arthritis to be conscientious, somewhat dedicated, rather intense persons who tend to become exhilarated or tense instead of sleepy when overly tired. Or there may be a history or evidence of a physiologic change resulting in fatigability of the musculoskeletal system or an alteration in their physical endeavor.

Most structures are capable of repair following a degenerative reaction; however, articular cartilage, when involved is largely incapable of repair. Hence, the cumulative effect of years of trauma would tend to make degenerative arthritis a disease of the older age group. Degenerative arthritis and aging, however, are not synonymous. Likewise, the younger age groups beyond adolescence are not immune, especially in instances where injury or cartilagenous disorder such as osteochondritis deformans has existed.

Normally, one would expect to find degenerative joint disease occurring in the joints where the greatest trauma occurs, but this is not true. The disease occurs for the most part in the spine, fingers, and knees; however, the hips, bunion joints, and the C.M.C. joints of the thumbs may become spontaneously involved in a small per cent of patients. Degenerative arthritis does not involve other joints unless trauma or disease has destroyed the cartilage. This selection of joints is of etiologic and nosologic significance, worthy of consideration.

Stecher[1] has pointed out that, "osteoarthritis, formerly thought of as being a generalized degenerative joint disease has been shown to be a collection of particular diseases, differing from each other in joints involved, sex ratio, age of onset, relation to the menopause, and heredity factors." He further states, "the pathologic changes have been confused with those of old age and the disease has been classed as a degenerative one. This is true of osteophytosis of the spine, which depends upon degeneration, loss of elasticity, and deformity of the intervertebral discs; in the hip and knee, however, there is invasion of cartilage by new blood vessels and the transformation of cart-

*Presented at the Second Oklahoma Colloquy on Arthritis and Rheumatic Diseases.

ilage to bony spurs." Stecher has pointed out previously that Heberden's nodes arise spontaneously without known predisposing cause. An inherited pattern has been determined clearly for the form of osteoarthritis which spontaneously affects the terminal I.P. joints. Apparently a single autosomal gene is involved. This is sex linked, dominant in females and recessive in males. This pattern has not as yet been shown to exist for other varieties of osteoarthritis, confirming Stecher's opinion that "osteoarthritis is a collection of particular diseases."

We have then, not a single disease entity causing the most frequently encountered of the rheumatic disorders, but an unknown number of variables which may result in a painful degenerative reaction. The resulting changes may follow injury, or be the result of a primary disease of the cartilage, or be the end result of intensive daily trauma in otherwise normal joint structures.

Trauma or mechanical force is of etiologic significance but perhaps not as much as has been previously suspected. Case histories on a group of Hindu porters whose ages varied from 25 to 65 years failed to reveal any complaints referable to their spine. Their radiograms, however (figure 1), were no different from those in comparable age groups in Americans of sedentary occupations. Figure 2 demonstrates advanced degenerative changes in a spine, associated with scoliosis. This patient, however, has not had any complaints referable to the spine, illustrating the poor correlation which exists between radiographic changes and musculoskeletal complaints. How then does one evaluate the symptomatology of degenerative arthritis and arrive at an equitable diagnosis?

Diagnosis of Degenerative Arthritis

First, one must determine the relative importance of the three contributing factors in each patient. This method is summarized in chart 1.

If the patient has his greatest pain, stiffness, and soreness upon arising in the morning and a tendency to "gel" after rest, feels his best at bedtime, has complaints in predictable areas and physical findings confirm his complaints, is affected by the weather and relieved at least in part by analgesics, then one suspects that his complaints are the result largely of organic changes. If the acute phase reacting laboratory data are normal, then one would suspect degenerative arthritis. If, on the other hand, he states that he feels his best after a night's sleep and there is no tendency to "gel" after a prolonged position, but as the day progresses there is pain somewhat in proportion to his daily endeavor and his complaints are in predictable areas and there is local tenderness to confirm his complaints but there is little or no relief from analgesics, no change from weather phenomenon, then he most likely is suffering from postural or general fatigue. Most patients with organic change have some degree of simple fatigue



FIGURE 1

FIGURE 1. Radiogram of the cervical spine of a 65 year-old male Hindu porter. This man reported that at no time had he had pain, stiffness, or soreness in his spine, yet he had worked as a rickasha puller from age 15 through 30, then as a porter carrying weights up to 60 pounds for variable distances.

FIGURE 2. This radiogram of the spine of a 70 year-old female patient demonstrates advanced degenerative lipping along the concave margin of the lumbar portion of a scoliotic spine. This patient complained only of her knees and reported that at no time had the spine been painful.



FIGURE 2

A GUIDE TO THE DIFFERENTIATION OF ORGANIC, FROM POSTURAL, OR FROM PSYCHOMOTOR, OR MALINGERING FACTORS IN THE CAUSE OF MUSCULOSKELETAL COMPLAINTS

	Organic disease.	Postural or mechanical strain.	Psychomotor or malingering.
Stiffness and soreness upon arising in A.M.	Marked and significant.	No, unless patient has lain in a position producing strain. Feels best after night's rest.	"Worse all the time," or "never get better."
Complaints in predictable areas.	Yes	Yes	No. "Hurt everywhere."
Relieved at least to a degree, by analgesics.	Yes	Very slight, if any.	"Nothing helps."
Affected by weather.	Yes	No	No; at least not consistently.
Does pain awaken patient at night?	Yes, especially if an expanding lesion in bone (tumor, abscess). No, if pathology mild.	Not unless postural strain occurs. Relieved by changing positions.	No. May have insomnia from other causes.
Degree of pain proportionate to objective findings.	Yes	No	No
Physical findings in predictable areas.	Yes	Yes	No. "Touch-me-not" reaction.
Evidence or signs of organic disease.	Apt to be present.	Yes, if anatomical defect is cause of strain. No, otherwise.	No
Radiographic change.	Usually present.	Only if anatomical defect is cause.	No. If changes are present, of no significance.
Laboratory change.	Yes, if characteristic of disease.	No, unless part of factor causing fatigability.	None pertinent to disease.

CHART 1

Features which help differentiate the three factors which contribute to musculoskeletal pain: organic changes, postural fatigue and psychomotor reactions or malingering.

superimposed with a modicum of increased pain toward evening, at least on occasions.

Should the patient, however, state that he hurts "all the time" and is "never any better," and whose complaints are not in predictable areas, and has a "touch-me-not" reaction on physical examination, and responds unpredictably or erratically to analgesics, weather, and physical strain, then it is safe to conclude that his complaints are the result of psychomotor phenomena or malingering regardless of changes which may be present in his radiograms. It is not unusual for patients with organic or fatigue pain patterns to have certain elements of psychomotor phenomena superimposed. Failure to differentiate these three basic causes of pain may lead to confusion and discouragement both on the part of the patient and his physician.

Symptomatology

What are "predictable" symptoms and findings in degenerative arthritis?

Degenerative joint disease, when it involves the hand, does so rather characteris-

FIGURE 3. Radiograph of hands demonstrating typical changes noted in primary osteoarthritis. The distal I.P. joints reveal loss of joint space with lipping about the opposing joint margins. There is ulnar deviation of index finger and radial deviation of the little fingers. Note also the involvement of the I.P. joints and the carpometacarpal joints of the thumbs. The metacarpophalangeal joints are normal, illustrating the characteristic sparing of these joints in this type of arthritis.

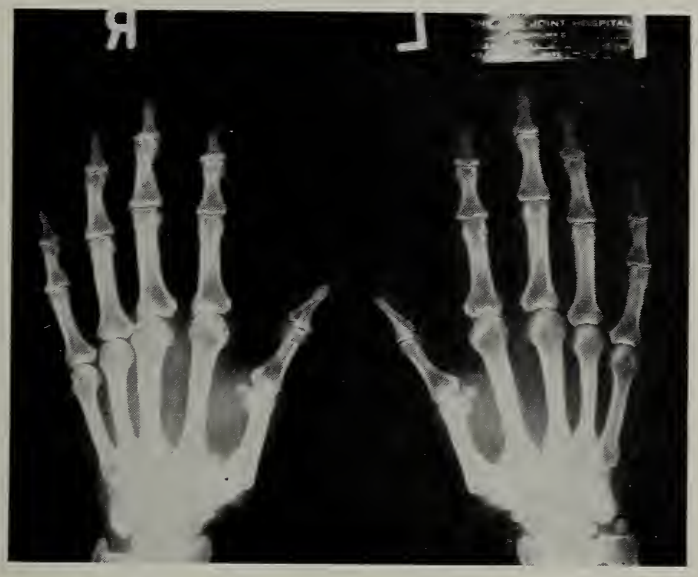


FIGURE 3



FIGURE 4

FIGURE 4. The changes present on the radiogram on the left have resulted from osteoarthritis. Note similarities between this film and the one which illustrates a "baseball finger."

tically (figure 3) by the production of Heberden's nodes involving the terminal I.P. joints. If they follow an injury such as a "baseball finger," then one would ascribe their cause purely to trauma (figure 4) and expect little or no involvement of other joints. If, on the other hand, these nodes arise spontaneously and tend to occur bilaterally symmetrically then one suspects an inheritable organic factor in the etiology and would expect involvement of the spine and knees in 12.7% of these patients, according to Stecher,[1] as compared to an incidence of 2.8% of his controls. Spontaneously occurring Heberden's nodes start gradually as a swelling of primarily the dorsum of the terminal I.P. joint, initially may be red, tender, and somewhat inflamed and fluctuant with sometimes a blister-like lesion on the dorsum. These then gradually subside over a six months to two year period to a resting stage of a hard, nonfluctuant, nonred, nontender lesion which may be a mild dorsal enlargement, or may have "two small pea sized nodules, a little to the side" as originally described by Heberden. As the lesions heal, the dorsal enlargement may increase, giving a flexed appearance. In the final stage, if there has been marked spur formation, the distal joint of the index fingers may attain ulnar deviation and the little fingers radial deviation, with the middle and ring fingers deviating in either direction. These nodes affect women approximately ten times as frequently as they do men and around half of the women date their onset from the menopause. There is no correlation of Heberden's nodes with obesity.

The proximal joints of the fingers may also be involved in degenerative arthritis in around half of the patients who have spontaneously appearing Heberden's nodes and may be mistaken for rheumatoid arthritis or gouty arthritis. They never sublux, dislocate, or fuse, but may restrict motion to the point of preventing complete extension, or making a tight fist. The M.C.P. joints are never involved in degenerative arthritis and if involved, indicate the presence of a different form of arthritis. The C.M.C. joints of the thumb may be involved spontaneously and may produce symptomatology reminiscent of a tenosynovitis of the abductor mechanism of the thumb. Otherwise, degenerative arthritis of the hand produces pain, stiffness, and soreness of the joints involved, usually not acute or severe, but there may be burning and tenderness when the distal I.P. joints are acute.

The symptom complex resulting from degenerative arthritis of the knees is rather simple: pain, stiffness, and soreness, worse

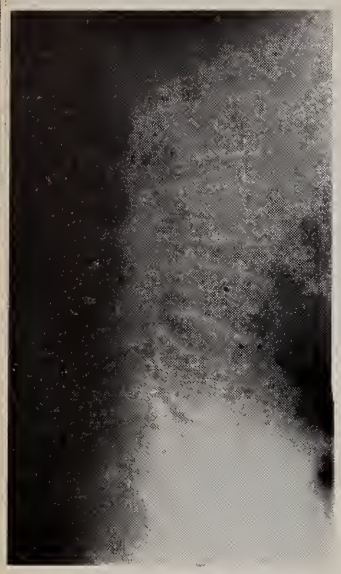


FIGURE 5. Loss of intervertebral joint space and lipping of opposing margins of the lumbosacral joint illustrate changes characteristic of a "ruptured disc."

FIGURE 5

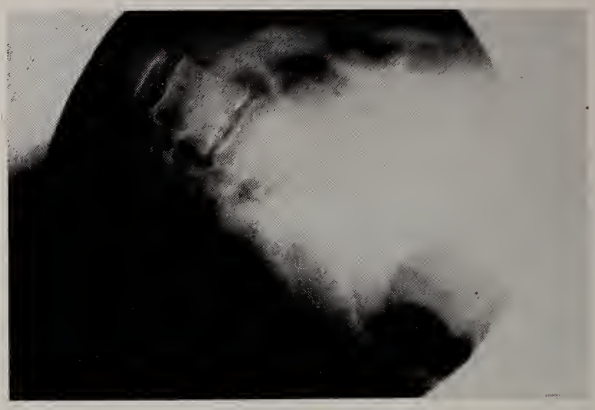


FIGURE 6. The decreased joint space occurring in both the lumbosacral and the fourth-fifth lumbar vertebrae in this radiogram may be properly termed "two 'ruptured discs'."

FIGURE 6

upon arising in the morning, improving after "limbering up," but worse the day following unusual stress. Many patients describe a "giving way" sensation when descending steps or an incline. Whereas all texts agree that obesity is a prime factor in production of painful degenerative reactions of the knees, our experience has not borne this out to the degree described by others. A significant proportion of our patients with knee complaints has been of average or less than average weight, but quick, wiry persons of the "race horse" type who may have a genu valgus or varus deformity.

The mechanism of the cause of pain in degenerative arthritis of the knees is far from simple, however. The aging changes in the knee have been carefully studied by Bennett, Wayne, and Bauer,[2] as they were previously by Heine,[3] and degenerative changes were demonstrated which were indistinguishable from degenerative arthritis but did not correlate in any way with whether or not the subjects had pain in their knees. One is justified to conclude that in the light of our present knowledge, *the clinical diagnosis of degenerative arthritis implies pain and tenderness.*

The mechanism of the cause of pain in the degenerative reactions of the spine is exceedingly complex and largely unknown. Most symptoms arise from the areas where the curve is reversed, i.e., the neck and low back, the cervical area being involved slightly more frequently than the lumbar area. When the cervical spine is involved, one may expect painful stiffness, crepitation, and soreness in the neck, worse upon arising in the morning, or there may be severe pain resulting from "cricks" or torticollis. There is usually radiation of pain, resulting in occipital, temporal, or frontal headaches which may be unilateral or bilateral. Pain may course into localized areas of the head and face, or result in the frequently complained of "neuralgias." There may be periods of "dizziness" or true vertigo, or "blackout" sensations or what some patients term as "crazy feelings" in the head. Sooner or later most patients have pain radiating into their shoulders and arms, varying from mild, diffuse muscular soreness to severe, localized, tenosynovial, bursal, or radicular involvement. The patient's course may be punctuated with a "frozen shoulder" or shoulder-hand syndrome, or other complicating reflex sympathetic dystrophic reactions. Chest pain is usually present from time to time, and may be associated with localized tender areas.

Arthritic involvement of the lumbar spine, as in the cervical area, is capable of producing a myriad of complaints. Local tenderness and soreness may be present over the spinous processes and paravertebral muscles, or mild to severe muscle spasm or severe "lumbago" attacks. Pain may radiate into the sacro-iliac areas and the posterior and lateral aspects of the hips or may provoke pain down the lumbar dermatomes, es-

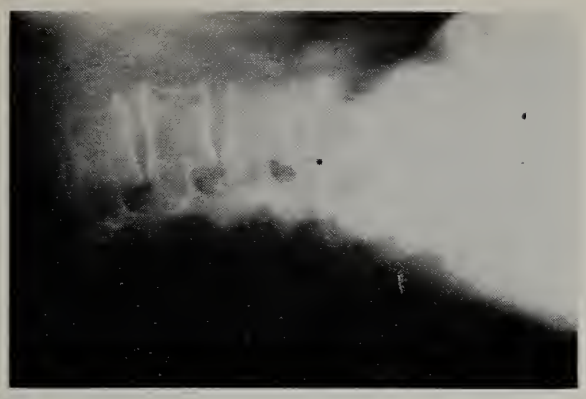


FIGURE 7

FIGURE 7. If three or more vertebral interspaces are decreased in width as illustrated in this radiogram of a lumbar spine, the term degenerative arthritis, or more properly ostephytosis should be applied. There is no evidence at this time which would indicate any essential difference in the etiology of "one ruptured dics" illustrated in figure 5 or "two ruptured discs" in figure 6, and this radiogram with three or more "ruptured discs."

pecially the fifth or the first sacral, or in some patients produce coccygodynia and rectal pain. Many complain of heel pain.

There is exceedingly poor correlation between the patient's symptoms and the radiographic changes. If the width of one vertebral interspace is reduced, the diagnosis of a "ruptured disc" may be properly applied (figure 5). If two interspaces are involved, the diagnosis of two ruptured discs may be used (figure 6). If, however, three or more interspaces are involved (figure 7), then the diagnosis of degenerative arthritis, or more properly osteophytosis should be used. Most writers agree that the term arthritis should be reserved for involvement of the apophyseal joints.

FIGURE 8. The degenerative interspace changes present in this thoracic spine are in a male patient age 49. His history of being "round shouldered" since age fifteen strongly suggests the presence of osteochondritis deformans at that age.



FIGURE 8

The thoracic spine is less frequently involved and is more likely to follow juvenile epiphysitis (figure 8), osteoporosis, or osteomalacia (figure 9). Intercostal or substernal pain may result along with tenderness and pain along the spinous processes. Degeneration of the thoracolumbar interspace is not uncommon and is capable of producing rather severe pain in the upper abdomen and lower chest indistinguishable at times from intra-abdominal or intrathoracic pathology.

When one elucidates the history of a pa-

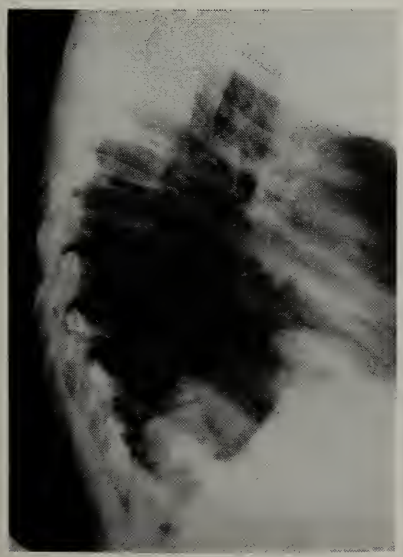


FIGURE 9

FIGURE 9. Demineralization of the thoracic spine, in this instance senile osteoporosis, which had become painful following a woodwork washing spree.



FIGURE 10

FIGURE 10. Degenerative reaction in the hip joint, probably initiated by a slipped epiphysis. This condition is usually termed "malum coxa senilis."



FIGURE 11

FIGURE 11. Malum coxa senilis resulting from Perthes' disease (osteochondritis deformans). Aside from a slight painless limp, this patient had no complaints until after the age of 50 although his deformity has been present since the age of eight.

tient with degenerative arthritis of the spine, a long-range, characteristic story usually evolves. During his twenties, thirties, and early forties, attacks of "lumbago," "sciatica," "sacro-iliac," neck "cricks," shoulder "bursitis," and headaches may occur from time to time, usually following periods of stress such as the pursuance of an endeavor with great intensity, surgical operations, pregnancies, menopause, unusual physical activities, or infections. The painful episodes may occur only on rare occasions and be limited to one or two areas, or there may be involvement of multiple areas which persists for years. Frequently, the diagnosis of fibrositis, myositis, neuritis, bursitis, tenosynovitis, or fasciitis is applied to these episodes; however, little or no change can be noted in the patient's complaints before and after the appearance of characteristic degenerative radiographic changes indicating a continuation of the same disease process throughout. Many patients complain less after the age of sixty than they did before the age of forty-five.

The hips are subject to degenerative reactions, and when involved, are known as "malum coxa senilis." In at least half of these patients, the disease follows some other primary disorders such as slipped epiphysis (figure 10), Perthes' disease (figure 11), protrusio acetabuli (figures 12 and 13), dislocation, fracture, or congenital malformation. Other forms of arthritis may also predispose. Pain from "malum coxa senilis," however, usually does not appear until the patient is in his midforties and does not get severe until he is in his sixties. Many of these patients develop intractable pain and become immobilized because of almost complete fusion of the hip joints.

Whereas most patients develop malum

FIGURE 12. Protrusio acetabuli (Otto's pelvis), another "type" of malum coxa senilis. Compare with film in figure 13 made on the same patient two years previously.



FIGURE 12

coxa senilis secondary to some other disorders, some have spontaneous onset. Figure 13 illustrates the development of protrusio acetabuli type deformity with no known predisposing cause.

The bunion joint, when afflicted with degenerative arthritis is termed "hallux rigidus" (figure 14). This condition usually follows an injury to the cartilage or may complicate a hallux valgus deformity. The resulting symptomatology is usually transient unless perpetuated by a hallux valgus deformity.

Treatment

Contrary to popular belief, most patients with degenerative arthritis can be relieved of their complaints by the use of measures now available. A notable exception, however, is hip joint disease. The management of the degenerative types of rheumatic disorders is as varied as the etiology and must be directed toward correcting as far as possible the three factors which contribute to the problem. Organic factors such as osteoporosis, osteomalacia, osteochondritis deformans, and metabolic errors secondarily involving the musculoskeletal system are capable of contributing to painful degenerative reactions when associated with sufficient stress. Also to be considered are atrophy of disuse, injuries, mechanical defects, rheumatoid arthritis, infections, and aging. Nothing is available presently that is capable of reversing the progressive degenerative cartilagenous process in inheritable primary osteoarthritis. However, in a sub-

stantial per cent of these patients, pain subsides when other contributing factors are corrected. Butazolidin, when effective and tolerated, is the drug of choice for the symptomatic control of the degenerative reaction. The use of 200 to 300 mgs. daily given somewhat as needed, is a relatively safe and effective measure in a substantial per cent of patients. Salicylate compounds are still the agents of choice for the daily aches and pains. Prednisolone phosphate, decaron phosphate, and hydrocortisone TBA administered intra-articularly are locally effective in temporary control of pain, stiffness, and effusion in well over half of the joints treated. The addition of the pancreatic proteolytic enzyme, dornase, or nitrogen mustard to these antiphlogistic glucocorticoids is usually rewarding in the more severely involved major joints. When given daily for three to five consecutive days, the anti-inflammatory effect may be long lasting.

Injections of local anesthetizing compounds are indicated in involved soft tissues and may be used along with the glucocorticoids. This procedure has added materially to the armammentarium of management of bursitis, tenosynovitis, fasciitis, and epicondylitis.

Utilization of various physical modalities is indicated in most patients, but chief emphasis should always be placed on mobilization and exercise of the part to forestall atrophy of disuse and improve the structure's ability to withstand stress. This is especially true for involvement of the spine[4] and knees.



FIGURE 13

FIGURE 13. Radiogram of same patient in figure 12 made two years previously. No known factors were present which would account for this change.

Correction when possible of organic factors secondarily contributing to the degenerative reaction is imperative. Osteoporosis resulting from deficiencies of protein, sex steroids, the intrinsic factor, and vitamin B12 requires consistent replacement therapy.

The sequelae resulting from osteomalacia caused by a fat or vitamin D deficient diet, steatorrhea, lactation, hyperparathyroidism, and renal osteomalacia usually respond well to correction of these errors.

Corticotropin administered intramuscularly along with the indicated replacement factors usually are a useful adjunct in relieving the acute muscle splinting accompanying "lumbago," torticollis, and other severe degenerative reactions.

Management of Physical Stress

The regulation of rest, exercise, and trauma is made difficult by the opposing deleterious effects of the atrophy of disuse versus strain from overuse. The patient's recognition and comprehension of the nature of the stress reaction may be enhanced by analogous illustrations understandable by him. The painful joint may be compared to a blister in the hand with emphasis on the fact that had the shovel been discarded sooner, the blister would have been avoided, and that the same shovel that produced the blister is also capable of causing a callous. The speed and intensity by which an endeavor is pursued may spell the difference between a toughening response or a degenerative reaction. The patient must rest when he is tired and avoid rushing, meeting dead-



FIGURE 14

FIGURE 14. Degenerative arthritis of the metatarsophalangeal joint of the great toe is known as "hallux rigidus."

lines, and the panicky feeling that all cannot be accomplished that he feels must be.

Specifically, in the spine,[4] increases of the lordotic curves must be avoided in the neck and low back. The "spectator's" or "on-guard" attitude of the neck as well as reading or televiewing in bed, and the use of high pillow are frequently precipitating causes of the cervical tension syndrome. Teaching the patient to keep one or both hips and knees flexed while sitting, standing or lying down reduces low back strain. Simply correcting the habit of a patient's lying on his abdomen may control a painful back or neck of long duration.

Knee strain may be reduced by the avoidance of extending the knees from a flexed position with weight bearing. Negotiating stairways and rough ground may also be stressful while quadriceps extension exercises and simple walking tend to strengthen a joint. It is imperative that the quadriceps mechanism be preserved through exercise at all times.

Management of the Factor of Psychomotor Phenomena, Psychogenic Rheumatism, and Malingering

These three problems may contribute significantly in any given patient's symptomatology. The "nervousness" complained of by most arthritic patients must be dealt with quite differently from true psychoneurosis (psychogenic rheumatism) or conversion hysteria or dishonesty of the patient who is malingering.

The practitioner is usually lacking in methods of definitive or satisfactory management of conversion hysteria. The malingerer with his usual manifest hostility presents a frustrating problem which is frequently made worse by the presence of his lawyer. Situational stresses predictably play a role in this group of patients. Sibling rivalry, entrapment problems, compensation reward, or hostility may contribute all or part of the pathogenic problem in a patient with psychogenic rheumatism. Fortunately, the patients who fall exclusively in this category are relatively few, less than five per cent in our experience.

On the other hand, the amount of psychomotor element present in most musculoskeletal stress or degenerative reactions is relatively strong. Using the blistered hand allegory, the physician may teach the patient that whereas the size of the shovel and the toughness of the hand are equally important, the patient's willingness to discard the shovel when he has "had enough" is of greater importance. The correction of why he continues beyond his endurance depends largely upon his recognizing the motivating force of conscientiousness and the vicious circle of excessive fatigue producing tension which interferes with sleep thereby producing more fatigue. The use of ataraxic agents such as meprobamate or promazine compounds aids in breaking up this vicious circle. If pain is sufficiently severe to interfere with sleep, analgesics are also needed. His subjective "nervousness" or tension is compared to the fretful, crying, defiant child who has gone too far past his nap time and cannot settle down sufficiently to get to sleep. It is further pointed out that punishment further upsets the child while gentling reduces his tension state.

The avoidance of excessive fatigue with its accompanying tension is necessary in order to control the symptomatology of degenerative arthritis. Whereas rest is the antithesis of stress, the patient's ultimate salvation lies in the correction of his structural easy fatigability through exercise and the rectification of the organic disorders contributing to his structural weakness.

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ABSTRACTS

Serial Fibrinogen Determinations In Patients With Leukemia

JACK D. WELSH,* CHARLES ROBINSON,** and ROBERT M. BIRD***

Am. Jour. Med. Sci., 241: 207-214, Feb., 1961

1. Twenty-six patients with leukemia were followed during a portion of their illness and serial fibrinogen concentrations were measured. Over half of the 225 fibrinogen determinations were abnormal. Seven patients, all with chronic lymphatic leukemia, never manifested an abnormal plasma fibrinogen value.

2. Considering single or consecutive values which were elevated as a period of hyperfibrinogenemia, then over half of such periods were either associated with infection alone or with infection and bleeding. In eight patients, the administration of adrenocorticosteroids at the time that the patient had an infection did not prevent the development of hyperfibrinogenemia.

3. Of the three documented episodes of hypofibrinogenemia, none was associated with in vitro clot lysis nor could any be directly related to bleeding.

4. A continued elevation of the fibrinogen concentration in the patient with leukemia and an infection indicates a poor response of the infection to therapy and a bad prognosis for the patient.

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**Research Trainee, Cardiovascular Section, Oklahoma Medical Research Foundation.
***Associate Professor of Medicine and Phvsiology.

Communications Therapy Program in a Veterans Administration Hospital

ELLA MARY GEORGE,* JOHN L. BOLAND, Jr.,** and ELIZABETH M. KEVIN***

Jour. Am. Med. Women's Assn., 15: 678-681, July 1960

The characteristics of a communications therapy program at the Veterans Administration Hospital in Oklahoma City are as follows:

1. Referrals to the communications therapy program early in the patient's illness are encouraged to speed rehabilitation of patients with speech.

2. Both group and individual therapy sessions are available to persons with these disorders.

3. Communications therapy is done under the close supervision of the speech pathologist, aided by physical therapists, occupational therapists, other professional workers, and volunteers.

4. Patients with various speech, voice, and language disorders work together in the group therapy sessions. This has been found to yield better clinical results than segregating the patient according to his problem.

5. The communications therapy program is closely knit into the over-all rehabilitation program for each patient.

6. Work with families and employees is considered an integral part of the rehabilitation program of these patients.

7. Every effort is made to acquaint all hospital personnel with the communications therapy program, its facilities, and its purposes.

8. Careful referrals to available local resources are made when the patients are discharged from the hospital.

*Chief, Physical Medicine and Rehabilitation Service, Veterans Administration Hospital, Oklahoma City, Oklahoma.
**Consultant in Speech Pathology and Rehabilitation, Veterans Administration Hospital, Oklahoma City.
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The Physiological Fractionation of Pituitary Gonadotropic Factors Correlated With Cytological Changes

A. A. HELLBAUM,* L. G. McARTHUR,** P. J. CAMPBELL*** and J. C. FINERTY****

Endocrinology, 68: 144-153, Jan., 1961

Removal of estrogen or androgen influence by gonadectomy and the controlled administration of gonadal steroids resulted in regulation of the concentration of follicle stimulating (FSH) and luteinizing (LH) factors in pituitary glands of young adult rats. These physiological changes were corrected with cytologic findings.

Gonadectomy in both sexes results in a marked increase in both LH and FSH in the pituitary as well as a corresponding increase in the red and purple (PAS-Methyl blue staining) pituitary gonadotropes. The administration of the equivalent of 3 mg. of estradiol benzoate per day over a 45-day period stimulates depletion of LH. FSH is also markedly decreased. The cytologic picture shows very few red but some purple gonadotropes. On the other hand, the administration of the equivalent of 3 mg. of testosterone propionate per day over a 45-day period also depletes the LH but the FSH content remains high and the correlated cytological findings show a corresponding decrease in the red gonadotropes, but with little effect on the purple ones. These findings show that FSH and LH can be differentiated by physiologic means and support the concept that the red gonadotropic cells are related to LH production or storage, and the purple ones to FSH production or storage.

*Professor of Pharmacology.
**Captain, U.S.A. Medical Corps.
***Intern, Mercy Hospital.
****Professor of Anatomy, University of Miami School of Medicine.

Profound Experimental Sensory Isolation

JAY T. SHURLEY*

The American Journal of Psychiatry, **117:** 539-545, Dec., 1960

A feasible and effective method has been described for studying a wide range of psychophysiologic phenomena under circumstances permitting exceptionally effective isolation and demonstration of discrete elements in the complicated, interconnected patterns and sequences underlying even the simplest human act or experience.

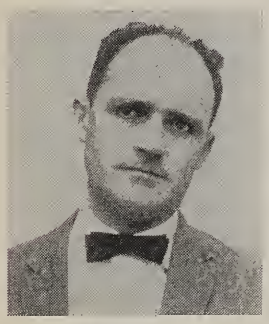
A number of hypotheses relating to very fundamental issues can be erected from these observations and can be subjected to experimental testing. In due course, such experiments may contribute to a more adequate understanding of human behavior.

*Professor of Psychiatry, Neurology, and Behavioral Sciences.

FACULTY NEWS

Faculty Appointments Made By Board of Regents

James A Merrill, M.D., former assistant professor of Gynecology and Obstetrics and assistant clinical professor of pathology at the University of California School of Medicine, San Francisco, has been appointed full time head of the Department of Gynecology and Obstetrics.



MERRILL

In other action by University Regents involving administration of medical school departments:

ONE—Phyllis E. Jones, M.D., associate professor of dermatology, was named chairman of the Department of Dermatology, succeeding the late John Lamb, M.D. Doctor Jones, a 1940 OU medical graduate, was associated with Doctor Lamb in the Lain-Lamb-Jones Clinic in Oklahoma City. She took her residency training at the University of Virginia Hospitals and also received a Master of Science degree in dermatology at Virginia.

TWO—Thomas H. Miley, D.D.S., B.S.D., assistant professor of dental surgery, became acting chairman of Dental Surgery, assuming the position while A. R. Drescher, D.D.S., is on temporary leave from administrative duty. Doctor Miley, a Baylor graduate, is a former University Hospitals resident.

The new chief of Gynecology and Obstetrics, Doctor Merrill, also holds the appointment of professor of gynecologic and obstetric pathology. He received his M.D. Degree at the University of California, took residency training in pathology at Cleveland City Hospital, Boston Lying-In Hospital and the Free Hospital for Women, and served three years as chief Ob-Gyn resident at the California Medical Center.

The physician was supervisor of the Pathology Research Laboratory of California's Cancer Research Institute. He is a Markle scholar.

Other recent faculty appointments include:

T. Glyne Williams, M.D., state director of mental health, associate professor of psychiatry and of preventive medicine and public health; Forrest L. Scharf, M.D., completing a residency in pathology at the Medical Center, assistant professor of pathology; Samuel Edward Dakil, M.D., McAlester, instructor in otorhinolaryngology; Joseph Valadares, Ph.D., former research fellow in the Department of Pharmacology, instructor in research pharmacology; Klaus Jensen, M.D., postdoctoral fellow in the Department of Microbiology, instructor in medicine; Earl Edgar Smith Jr., M.D., Tulsa general practitioner, junior clinical assistant in medicine; T. A. Kutkam, M.D., research assistant at the Oklahoma City VA Hospital, research associate in pathology.

Special Article

Preliminary report on needed improvements in the facilities of Tulsa's Children's Medical Center.

Care of Children With Emotional Problems

JOHN L. BYRNE*

THE POTENTIAL for recovery from mental illness has increased many fold in the last few years. Modern methods of treatment are making it possible to restore an increasing number of mental patients to their homes and jobs. Children with emotional problems which interfere with their ability to function at school, in the home, and within the community, can receive much better scientific treatment than they could just a few years ago.

A patient's chances of recovery are largely dependent upon the quality of the mental hospital or clinic to which he is admitted. At the present time about forty-five per cent of the patients admitted to the average mental hospital are eventually discharged as improved or recovered. In a few well equipped and well staffed mental hospitals, where patients are given the best and latest treatment, as many as seventy per cent improve or recover.

We discussed in a recent brochure of our Child Guidance Clinic that besides being our most precious heritage children are fascinating individuals. Their growth and development is phenomenal from an original cell to a complex integrated child one hundred and thirty billion fold larger than at conception. During this period of tremendous growth, a vast number of adjustments are made to life situations, parents, siblings, school, church and a myriad of other influences. Sometimes undue stress in one or more areas may require that children receive some expert professional counseling and guidance to overcome certain obstacles.

Tulsa Child Guidance Clinic provides the outpatient facilities to care for many of these emotional problems within the community. Those children requiring more extensive psychotherapy and other assistance are able to utilize the facilities of the Children's Medical Center inpatient hospital for intensive medical and psychiatric treatment.

Two of the most significant factors in the recovery of a mentally ill child are: (1) The age of the child and (2) Duration of the illness prior to hospitalization. The younger the patient when the disease strikes and the more quickly he starts receiving treatment, regardless of age, the better are the chances

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of recovery. The volume of children requiring such services has far outstripped our ability to provide them.

More than sixteen million Americans, one in every ten are suffering from a mental or emotional disorder. A recent survey conducted by the Commission on chronic illness bears out the incidence of mental disorder to be one in ten. They warn that "Our findings that approximately one-tenth of an urban population have one or more of a rather well defined mental disorder is sufficiently alarming and one obviously calling for serious and prompt consideration."

At the present time, one out of every ten children born each year will need to go to a mental hospital sometime during his life time. Twenty years ago this rate was one in twenty. Approximately seven hundred and fifty thousand people are under care in mental hospitals at this moment. This is as many patients as are in all other general and special hospitals combined.

There will be more than two hundred and fifty thousand people, one quarter of a million, admitted to mental hospitals for the first time this year. In addition to this number, approximately one hundred thousand more patients will return to mental hospitals as re-admissions.

During the last few years, there has been an average of two and one-half million men, women and children treated for some form of mental disorder in either mental hospitals, psychiatric clinics, or by private psychiatrists. Mental disorder is an important factor in fifty to seventy per cent of the medical cases treated by physicians.

Children and teen agers have a high incidence of mental illness. At least two hundred thousand children each year receive treatment for less serious disorders in mental health clinics throughout the country. Approximately five thousand children and young people under nineteen years of age are admitted to state mental hospitals each year. There are approximately forty residential treatment centers providing care for two thousand five hundred children with serious emotional disturbances.

Recently a committee of the American Psychiatric Association which provides states with an inspection service of mental hospitals reports that of one hundred and fifty-three mental hospitals inspected by their committee, only fifteen merited approval, thirty-six merited conditional approval, and the other one hundred and two did not even meet the minimum standards of safety and quality. There are approximately twelve hundred clinics in the entire United States. About half of these give only part time service. Based on one clinic for every fifty thousand population as an optimum figure, there is a need for at least thirty-three hundred full time clinics.

In Oklahoma in 1958, there were 334.4 patients per hundred thousand population in mental hospitals. Our mental hospitals had 47.8 per cent of the physician staff necessary to properly treat the patients. There were 1.9 professional personnel per hundred patients. There were 2.8 psychiatrists per hundred thousand people in the Oklahoma population. There was an average per capita expenditure for mental hospitals of $3.52. Compare this with an average per capita expenditure of Children's Medical Center in 1959 of $27.20. There was an average per capita expenditure for community program of four cents. One and ninety-six hundredths per cent of all general state expenditures was for hospital expense. Twenty-five per cent of this figure was for mental hospitals and mental health.

In the material prepared for the White House Conference on Children and Youth, there were many interesting comments regarding the needs for increased services for mental health of children. Reference was made to the fact that long waiting lists for Child Guidance Clinics were customary even for new clinics which had not as yet opened their doors. Residential treatment centers offering high standards of service found more applications for admissions than they could process. The number of trained staff available to work with children was proportionately less even though there were additional staff people in the field because of this tremendous growth in application for service. The National Association for Mental Health noted that although there were

over 3,700 psychiatrists serving in psychiatric hospitals, an additional 2,800 were needed.

Fifty per cent of all clinics are located in Northeastern states and sixty-seven per cent of these in cities of over fifty thousand population. There are 10,500 psychiatrists in the nation of which 3,825 are in New York State. Seventeen states have fewer than fifty psychiatrists. More than half of the psychiatrists are practicing in fifteen metropolitan areas which contain less than one-third of the nation's people.

One of the most remarkable aspects of improved psychiatric care has been the rapidity with which patients can recover and be returned to the community. These shorter periods of hospitalization have meant that far more patients can be treated in the same facility with the same staff.

The National Association for Mental Health states that with "group care and treatment" fifty per cent of all patients could leave mental hospitals partially or totally recovered. Twenty years ago eighty per cent of the patients admitted to mental hospitals in Philadelphia remained there until they died. But with the advent of new methods of treatment and staff improvements these figures had completely reversed themselves by 1959. Eighty per cent of all patients were being discharged within one year of admission.

Since 11,500 children and youth are admitted to public mental hospitals each year and over 1,400 of them are under fifteen years of age, on any one day 13,500 youth are in hospitals, 1,500 of them under 15 years of age. In addition, there are approximately 2,500 children receiving full time care in forty recognized treatment centers in the United States.

Public Health Psychiatry distinguishes three levels of prevention: (a) Primary (steps to obliviate the occurrence of disease), (b) Secondary (early diagnosis and prompt treatment of disease already present), (c) Tertiary (limiting the disability and fostering the rehabilitation of the incurably ill). Our primary role lies in that of the secondary classification, early diagnosis and prompt treatment of disease already present.

Purposes of the Child Guidance Clinic are three fold: (1) Diagnosis and treatment of emotional problems of children through seventeen years of age. (2) Consultation with physicians, agencies, schools, courts, and institutions to provide assistance and advice regarding psychiatric problems of children. (3) Preventive and educational programs designed to arouse interest and to stimulate community reaction to mental health problems.

The greatest number of children seen in the Child Guidance Clinic have disabilities whose early recognition and prompt treatment will certainly shorten the duration of their illness, reduce discomfort, limit the complications, and minimize the trauma to them and their families. The procedures which we use at the present time include screening through the school teacher, evaluating the services of pre-school clinics and well baby clinics, physician and social agency reports. A major problem in early detention is to overcome public resistance to accepting emotional disturbances in children. Our program will progress much more rapidly with better public understanding. It is also important that we limit our therapy to those children whose problems are most amenable to treatment. It becomes necessary for the staff to be selective in the patients they admit for general treatment and refer to another agency for long term care those children who need it. If it becomes necessary that a child be placed in an inpatient facility for treatment, planning should begin prior to admission for continued community participation upon discharge.

We need to develop increased services in our Child Guidance Clinic which will require additional subsidy support from agencies, state, city and county as well as from private philanthropies. Those children who require separation from their families for a period of time in order to make adjustment should do so in a residential treatment facility which is able to provide the complete program to restore these children to the community as productive individuals. A residential treatment center was clearly defined a few years ago as "residential treatment is therapeutically directed institutional or group care for emotionally disturbed chil-

dren in which all possible ways of helping—casework, education, recreation, planned group life, and psychotherapy—are utilized and integrated into a clinically oriented and directed treatment plan for the individual child." It is not merely the removal of the child to a benign environment where he is available for psychotherapeutic interviews. The essence of residential treatment lies in milieu—in the complement of adult child relationships and experiences which can be clinically manipulated and controlled in the interest of therapy.

Despite the variation in the treatment centers, they all have certain features in common. They all emphasize the importance of daily living experiences, structure and organization of the child's life, the various forms of occupation, recreation and creative experiences. They all utilize education therapeutically, whether on the premises or off in some form of psychotherapeutic effort; and all of them utilize staff in the direct handling of children for relationships or experiences of therapeutically helpful nature.

The Oklahoma White House Conference on Children and Youth in their sub-section under mental health had the following pertinent statements: (1) The State of Oklahoma now has four state hospitals one of which has an active inpatient service for psychotic children. (2) The state also supports two schools for retarded children grossly overcrowded. (3) The only private psychiatric facilities for inpatient care of children in the state, at this time, are in Tulsa. (4) The University Hospital Inpatient Psychiatric Section has only twenty beds and only occasionally is an adult child admitted there for treatment. (5) There are four Child Guidance Clinics in the State all of which have complete, although small, staffs. (6) The University Medical Center has an outpatient clinic for both children and adults. (7) There is one Child Guidance Clinic in the state which has an incomplete staff with only part time psychiatric consultations. (8) There are two juvenile detention homes in the state.

In 1955, a program for the training of psychiatric residents was inaugurated at the University of Oklahoma Medical Center. These residents receive some specialized training in child psychiatry at the guidance centers in the State. There is not a full time program in child psychiatry at the University Hospital at the present time.

The significant problems for the decade ahead pointed out that more training facilities are needed in both the public child guidance clinics and Oklahoma University Medical Center in the training of psychiatrists, clinical psychologists, and psychiatric social workers. Too, there is a desperate need in the State for adequate inpatient facilities for care of disturbed children.

The Children's Medical Center has the unique opportunity to develop one of the most outstanding facilities in the country in the care of children with emotional problems. Our present facility with its outpatient resources, inpatient supplementary services for children needing intensive therapy and the teaching programs instituted through our own staff can grow materially to assist in the program of providing adequate services in the state of Oklahoma for emotionally disturbed children. There have been specific recommendations made for the creation of what are referred to as Child Care Centers. These would include outpatient services, day hospital programming and inpatient services. They would be accountable for providing and securing needed care for the families within their scope of activities. A greater portion of these services are being provided by us at this present time. We feel the need of establishing increased services for a day hospital program. These are children who need more intensive care than they can receive in a one day a week psychotherapeutic session and yet would not require twenty-four hour medical supervision. Often times their rate of recovery would be better if they were able to return to their family in the evening but be able to have the support and assistance of a therapeutically oriented staff during the day. A second aspect which requires considerable thought is that of a half-way house for children who are returning to the community and who need certain supportive care and yet can function quite independently in most of their daily activities. A half-way house could be provided for children who are in a semi-discharged status from

the inpatient facility of Children Medical Center or who are referred to half-way house from state hospitals. They would be able to attend regular school or participate in a job in the community.

The Board of Trustees of Children's Medical Center is seriously considering the establishment of a twenty bed unit for emotionally disturbed children. This program would be particularly adapted to those children from twelve to sixteen years of age. Many children with emotional disturbances under the chronologic age of twelve years could be quite adequately cared for in our present building.

There has been considerable discussion by the Active Medical Staff and the Board regarding the decrease in incidence of long term medical problems which we cared for in the past. Positive statistics are difficult to obtain regarding the decrease in long term care for many medical problems, except that all agencies report a decrease.

The major problem with which we must cope is that of adequate financing of such a program. This will have to be done in several ways: (1) Encourage the legislature to appropriate adequate monies for the support of mental health programs. This would include the subsidy by the state of psychiatric teams to work in child guidance clinic programs. (2) The increase in the reimbursable per diem rate from such agencies as the Crippled Children's Unit of the Department of Public Welfare. (3) The broadening of Blue Cross and other insurance agencies to provide increased coverage for mental illness rather than limiting the coverage as they do at the present time. (4) The development of private philanthropy to assist in financing programming.

As we plan our total growth it becomes essential that we consider just what portion of the mental health problem of the State of Oklahoma can be borne by the Children's Medical Center. As has been mentioned previously, early diagnosis and treatment is essential in recovery. Children who are required to enter state facilities where they cannot receive intensive psychotherapy tend to develop fixed psychotic patterns which will, in many instances, require that they remain hospitalized for the remainder of their lives.

We realize that mental health care is an extremely expensive commodity though we must evaluate whether the expenditure of $5,000 to $10,000 on a single child is not a very modest investment in the future of the patient who can be productive for the rest of his natural life. Patients entering state hospitals even at a nominal per capita cost will require the expenditure of approximately $75,000 to maintain them in a custodial facility for their life span.

During the past few years there has been a tremendous increased interest in emotional maturity, the ultimate goal of mental health, yet it is not a new invention. It has been present since man first found it necessary to relate himself to other people in his struggle for existence.

This is a community problem. It is one in which we all play an important part. We must do all we can to promote emotional growth in ourselves as individuals and to encourage it in those with whom we come in contact. Our everyday attitudes and interpersonal relationships are extremely important in the promotion of good mental health. We cannot give emotional maturity to our children; we must cultivate it. If we provide the proper setting, it will flourish.

20th Anniversary of U.S. Savings Bonds

As a physician you know quite well the importance of milestones in the medical profession, those magnificent discoveries that opened the doors to further research, the conquering of dreaded diseases and the opening of new health vistas to us all. The medical profession proudly points to these milestones year after year.

All America has reached another important milestone in 1961—the 20th Anniversary of the United States Savings Bond Program. For 20 years Savings Bonds have done their part in bolstering our nation's economic defense, providing college educations for our young, making down payments on homes, businesses, as well as providing for aid to retirement and other cherished desires.

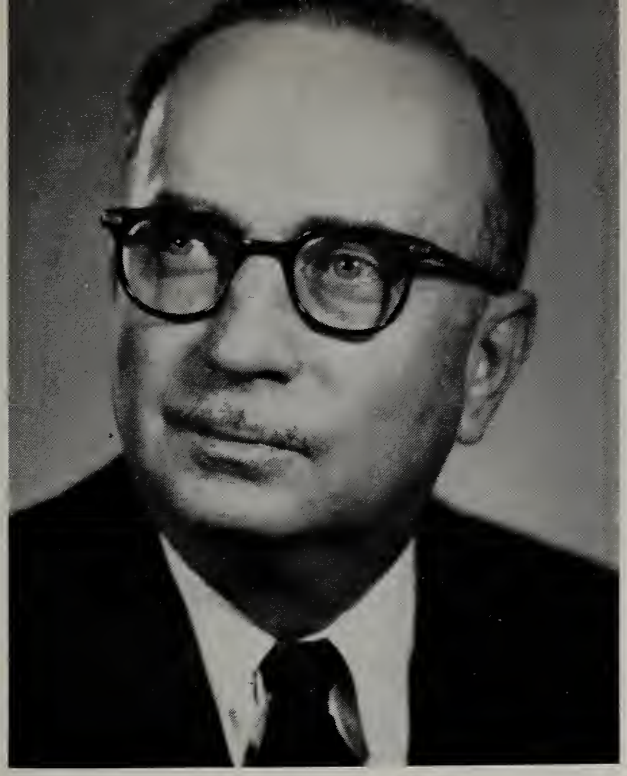
Yes, all America will be pointing to U. S. Savings Bonds this year: To the Series E with its new 3¾% interest rate and maturity of seven years and eight months. They return $100 for every $75 invested, and you may hold them for 10 years beyond maturity while your bonds continue to increase in value.

The Series H, at the rate of 3¾% when held to maturity, is the current income bond that pays you interest directly by Treasury check every six months. Series E or H make an ideal investment for the doctor. They are not affected by market fluctuations, and they are indestructible. If they are lost or destroyed, you will be issued new securities to replace them. Moreover they are backed by the full faith and credit of the United States.

If you do not already buy bonds through your bank, why not let them set up a program to supply you with a bond every month and charge your account? Many physicians save this convenient way. We hope that in 1961 you will buy an extra amount of U. S. Savings Bonds.

Sincerely yours,

Clinton Gallaher M. D.
President



CLINTON GALLAHER, M.D.
President

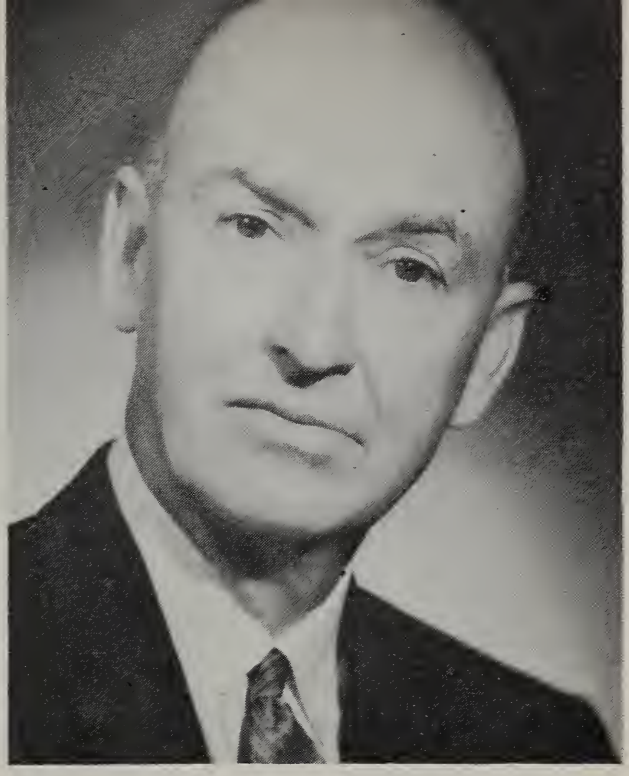
The new President of the Oklahoma State Medical Association, Clinton Gallaher, M.D., Shawnee, steps into the office with an extensive background of experience in the affairs of organized medicine.

Following receipt of his medical degree from Northwestern University in 1929, the Shawnee native married Maudie Bowles and settled down to a lifetime of service to his profession and community, interrupted occasionally by postgraduate courses in his specialty, EENT, which included a 1936-37 residency at the Chicago Eye, Ear, Nose and Throat Hospital.

Doctor Gallaher served an eight year stint, from 1947 to 1955, as Secretary of the Oklahoma State Board of Medical Examiners. He has been a member of the OSMA's Council since 1939, and was Speaker of the House of Delegates from 1952 through 1960, when he was named President-Elect.

Other professional activities include memberships in the Southwestern Surgical Congress, the World Medical Association, and the American College of Surgeons. Long active in civic affairs, Doctor Gallaher is a past-president of the Shawnee Rotary Club.

The Gallahers are members of the First Presbyterian Church, where the doctor has served as both Elder and Trustee.



J. HOYLE CARLOCK, JR., M.D.
President-Elect

Named by the House of Delegates to be Doctor Gallaher's successor next Spring, J. Hoyle Carlock, Jr., M.D., Ardmore, will also provide the association with experienced leadership qualities.

He is a past-president of the Carter-Love-Marshall District Medical Society, has served for ten years as a member of the state association's Council, and has been both Vice-Speaker of the House of Delegates and Vice-President of the OSMA.

Doctor Carlock was born in Ardmore and attended public schools there. In 1935, he was awarded a medical degree from Tulane School of Medicine. At Tulane, he was a member of Nu Sigma Nu and AOA.

Following hospital training in New Orleans and Temple, Texas, he took further postgraduate work at Rotunda Hospital, Dublin, Ireland, and at American University in Vienna.

He married Ardmorite Ruth S. Small, and they have an 18 year-old daughter and two sons, 16 and 20.

His general practice was interrupted for five years while he served as a Lt. Colonel with the 3rd Army, ETO, during World War II. A prominent citizen of Ardmore, he has served on the school board for ten years and is a Steward and Trustee of the First Methodist Church.



ANNUAL MEETING REVIEW

One of the outstanding guests to appear before the House of Delegates was F. J. L. Blasingame, M.D., Executive Vice-President of the AMA, shown here as he outlined the program and objectives of the parent organization. The meeting was attended by 120 representatives of county medical societies.

55th Meeting of OSMA

Despite torrential thunderstorms which placed several state highways under water, more than six hundred physicians arrived in Tulsa for the OSMA's 55th Annual Meeting, May 7-9.

The meeting, under the direction of General Chairman C. S. Lewis, Jr., M.D., and Program Chairman Donald L. Brawner, M.D., was hailed by many as one of the best planned scientific and social outings in association history.

Scientific activities began on Sunday, May 7th, and continued through Tuesday, May 9th, with all sessions held in the Mayo Hotel. The association's Council met on Saturday and the House of Delegates conducted a ten-hour session on Sunday, running simultaneously with the first-day scientific program. Inauguration of President Clinton Gallaher, M.D., Shawnee, was held Monday night during the Inaugural Banquet. Other related events included an association dance on Tuesday evening, two roundtable luncheons and the annual golf tournament.

New Officers

Elected during the House of Delegates meeting were: J. Hoyle Carlock, M.D., Ardmore, President-Elect; Peter E. Russo, M.D., Oklahoma City, Vice-President; Malcom E. Phelps, M.D., El Reno, Delegate to the American Medical Association; and Tom Points, M.D., Oklahoma City, Alternate Delegate to the AMA.

Complete proceedings of the House of Delegates will appear in the July and August issues of *The Journal.*

Assistance to Medical Students

Breaking a long drought in the financial assistance available to the students at the University of Oklahoma School of Medicine, the House of Delegates approved a recommendation of the association's Council on Professional Education, which called for the creation of a scholarship, grant-in-aid and loan fund, to be financed through a $5 annual increase in dues.

The $5 received from each physician (beginning with the 1962 dues) will be split between two separate programs; $3 will be earmarked for the loan program, and $2 for scholarships and grants-in-aid. Over $7,500 would be contributed annually by Oklahoma physicians.

Loans will bear 3% interest beginning one year after the student graduates. Payment must begin within five years after graduation, and must be completed within three years after it is begun.

Scholarships will be awarded to outstanding students, in an effort to encourage and reward excellence. Grants-in-aid will be non-repayable gifts to needy students.

Other Business Actions

In other actions, the House of Delegates:



The AMA leader was flanked by President Walter E. Brown, M.D., and House Speaker Marshall O. Hart, M.D.

• Approved eight regional postgraduate courses for the 1961-62 year, plus the inauguration of an educational television experiment.

• Recommended a program for concerted action at the local level in encouraging high-school students to pursue medical careers.

• Officially endorsed Senate Bill 81 (to provide a Medical Examiner System) and Senate Bill 291 (to provide immunity from civil action when emergency care is rendered at accident site).

• Approved House Bill 829, thereby endorsing the establishment of a dental school in Oklahoma.

• Supported the Council on Insurance's action in recently transferring the group health and accident insurance coverage to the Insurance Company of North America.

• Adopted a plan for completely revising the Blue Shield indemnity payment schedule, and generally recommended an upgrading in Blue Shield coverage, to the extent that all Oklahomans, regardless of the economic environment in which they live, will be able to purchase a prepayment plan which will cover approximately 80-85% of the cost of professional services in their communities.

• Officially opposed the service contract insurance principle.

• Resolved that the AMA should negotiate a modification of the American College of Surgeons' pronouncement against use of the referring physician as surgical assistant.

• Heard Doctor F. J. L. Blasingame, AMA Executive Vice-President, appeal for more grass roots interest and support in the affairs of American medicine. Doctor Blasingame presented a comprehensive appraisal of AMA activities, with particular emphasis on legislative matters.

• Supported a proposed increase in AMA dues, but suggested economies in operations, such as discontinuing the scientific portion of the mid-winter meeting.

• Restated unqualified opposition to the corporate practice of medicine.

• Launched an effort to study ways and means of finding aged persons who are unable to obtain necessary health care through



During the House of Delegates session, State Representative Ed Bradley (right), Tulsa, presented a commendatory resolution from the Legislature to the OSMA, represented by Doctor Brown. The resolution cited the state association and other groups for continued sponsorship of the Governor's Committee on Employment of the Handicapped Essay Contest.

private resources or existing programs; and to provide needed care under association auspices.

• Appealed to the AMA to work with the AAGP in improving general practice residencies.

• Watched outgoing President Brown present an American Medical Education Foun-

dation check for $7,943.82 to Dean Mark R. Everett, Ph.D., University of Oklahoma School of Medicine.

Inaugural Ceremonies

Nearly 500 physicians and their wives attended Monday night's Inaugural Dinner, to pay tribute to outgoing President Walter E. Brown, M.D., and to welcome Clinton Gallaher, M.D., as the new President (Inaugural Address appears on President's Page, this issue). Following inaugural ceremonies, held in the Mayo Hotel's Crystal Ballroom, the sell-out audience was well entertained by the Musical Doctors of Enid, and by Walter (Zaney) Blaney, magician-comedian from Texas.

Annual Dance

A successful innovation in social activities was the separation of the inaugural ceremonies from the annual dance. The dance was held Tuesday evening in the Crystal Ballroom, with the Paul Neighbors Orchestra playing to a capacity crowd.

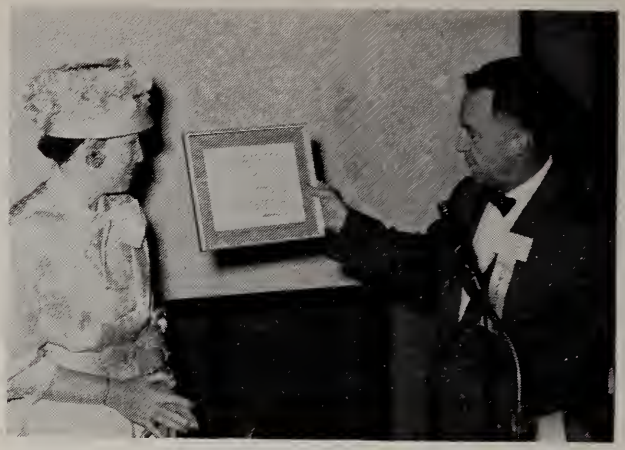
Once again the singing troupe of doctors from Missouri, The Greene County Medical Society Boys, delighted Oklahomans with their medical parodies of popular songs.

The Program

Nineteen visiting guest speakers and thirteen Oklahoma discussants drew good audiences during the three days of scientific sessions. Eleven outstanding medical movies were shown.

Providing diversion from the scientific program, and one of the outstanding features of the meeting, was a two-hour panel presentation on the "Socio-Economic Problems of Medicine." Prominent participants included T. Dale Alford, M.D., U.S. Representative from Arkansas; Mr. Carl Anderson, National Association of Clinic Managers, Portland, Oregon; F. J. L. Blasingame, M.D., Executive Vice-President, AMA, Chicago; Robert S. Myers, M.D., Executive Assistant Director, American College of Surgeons, Chicago; and, John G. Walsh, M.D., President, American Academy of General Practice, Sacramento, California.

Forty-five scientific and technical exhibits complemented the educational merits of the meeting. Many specialty organizations coordinated their annual meetings with the state association event, some taking advantage of guest speakers of their specialties.



Outgoing President Walter E. Brown, M.D.; presented his auxiliary counterpart, Mrs. Virgil Ray Forester, Oklahoma City, with a certificate of appreciation from the OSMA.

The annual Physicians Hobby Show provided an outstanding change-of-pace contribution to the exhibit section of the meeting. More than thirty medics displayed the products of their pastime talents.

Golf

Perennial tournament winner E. Malcolm Stokes, M.D., Tulsa, once again captured the low gross trophy, with a well-played 76 on Tulsa's rain soaked Oaks Country Club course. The low net trophy also went to a Tulsan, William M. Benzing, Jr., M.D., who carded a score of 77.

This year's tournament was planned by a committee headed by James W. Kelley, M.D., Tulsa. Trophies through the donations of fourteen Tulsa druggists were presented to Doctors Stokes and Benzing during intermission at Tuesday night's dance.

Auxiliary Elects

The Woman's Auxiliary conducted another outstanding annual meeting in conjunction with the principle event. Mrs. Virgil Ray Forester, Oklahoma City, turned over the reins of the distaff group to incoming President, Mrs. W. Pat Fite, Sr., Muskogee. Other officers elected were: Mrs. Milton L. Berg, Tulsa, President-Elect; Mrs. Peter A. MacKercher, Ponca City, First Vice-President; Mrs. Tom C. Sparks, Ardmore, Second Vice-President; Mrs. Charles W. Freeman, Oklahoma City, re-elected Secretary; Mrs. Louis S. Frank, Oklahoma City, Treasurer; and Mrs. C. F. Foster, Jr., Oklahoma City, Treasurer-Elect.

Councils, Committees Announced for 1961-62

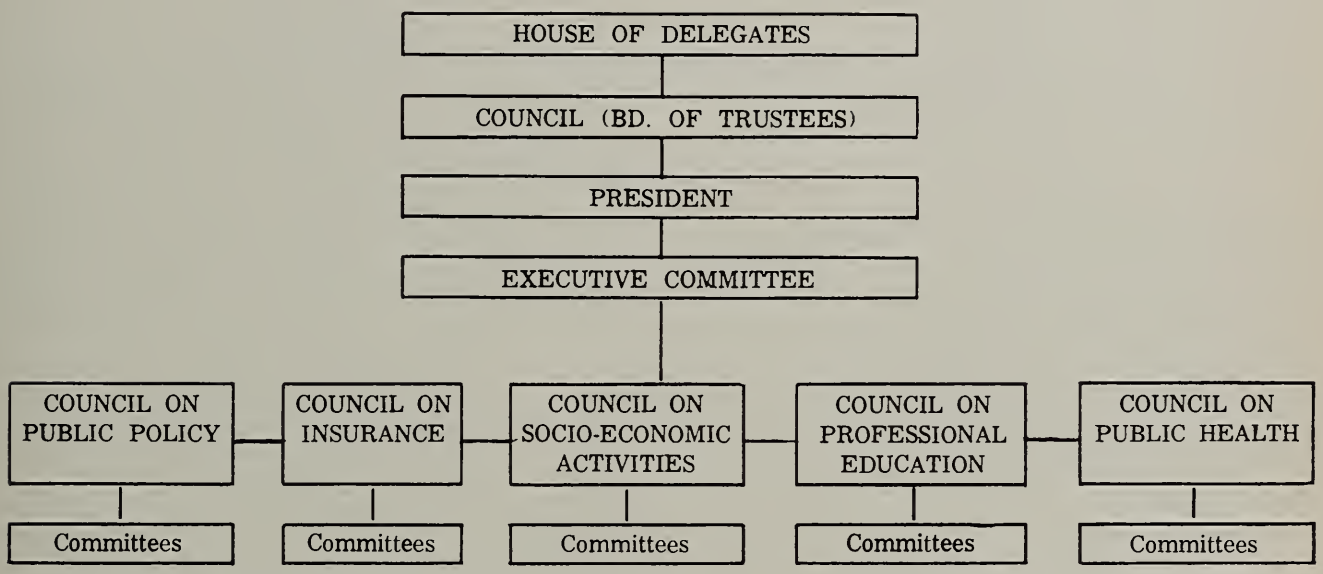
President Clinton Gallaher, M.D., has completed the appointments to the Councils and Committees of the OSMA for his term of office.

The experimental use of five Councils, and the grouping of Committees under these Councils, was officially endorsed at the 55th Annual Meeting, upon recommendation of outgoing President Walter E. Brown, M.D.

Plans are now under way to prepare the necessary amendments to the Constitution and Bylaws, thereby officially changing the nomenclature of the various elements of the organizational structure.

Below, and on the following pages are listed the current personnel assignments. Further appointments to certain committees are contemplated.

ORGANIZATIONAL STRUCTURE



Standing Committees

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Clinton Gallaher, M.D., Shawnee, Chairman
Walter E. Brown, M.D., Tulsa
Peter E. Russo, M.D., Oklahoma City
J. Hoyle Carlock, M.D., Ardmore
Mark R. Johnson, M.D., Oklahoma City
Wilkie D. Hoover, M.D., Tulsa

SCIENTIFIC WORK

Rex Kenyon, M.D., Oklahoma City, Chairman
Marcus S. Barker, M.D., Oklahoma City
Mark A. Everett, M.D., Oklahoma City
W. Pat Fite, Sr., M.D., Muskogee
Bert F. Keltz, M.D., Oklahoma City
R. W. King, M.D., Oklahoma City
James Murphree, M.D., Ponca City
G. R. Russell, M.D., Tulsa
William T. Snoddy, M.D., Oklahoma City
Paul T. Strong, M.D., Tulsa
Robert T. Sturm, M.D., Oklahoma City
Karl F. Swanson, M.D., Tulsa

CREDENTIALS*

C. Riley Strong, M.D., El Reno, Chairman
William R. Cheatwood, M.D., Duncan
Charles E. Wilbanks, M.D., Tulsa

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E. K. Norfleet, M.D., Bristow
Louis H. Ritzhaupt, M.D., Guthrie

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R. Q. Goodwin, M.D., Oklahoma City, Chairman
John F. Burton, M.D., Oklahoma City
E. C. Mohler, M.D., Ponca City
A. T. Baker, M.D., Durant
Walter E. Brown, M.D., Tulsa

*Current appointments, until January, 1962.

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John E. McDonald, M.D. Tulsa
Elmer Ridgeway, M.D. Oklahoma City
M. H. Newman, M.D. Shattuck
William A. Matthey, M.D. Lawton

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M. H. Newman, M.D., Shattuck
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Ceylon S. Lewis, Jr., M.D., Tulsa

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Francis A. Davis, M.D., Shawnee

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Robert O. Ryan, M.D., Norman
Cody Ray, M.D., Pawhuska

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W. A. Matthey, M.D., Lawton
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Horton E. Hughes, M.D., Shawnee
Curtis Cunningham, M.D., Clinton
C. D. Cunningham, M.D., Ardmore

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John R. Taylor, M.D. Kingfisher

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Stillwater

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of the
OKLAHOMA STATE MEDICAL ASSOCIATION
1961-62

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PRESIDENT-ELECT—J Hoyle Carlock, Jr., M.D., Ardmore

VICE PRESIDENT—Peter E. Russo, M.D., Oklahoma City

PAST PRESIDENT—Alfred T. Baker, M.D., Durant

PAST PRESIDENT—Walter E. Brown, M.D., Tulsa

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ALTERNATE DELEGATE TO THE A.M.A.—Thomas C. Points, M.D., Oklahoma City

DELEGATE TO THE A.M.A.—Wilkie D. Hoover, M.D., Tulsa

ALTERNATE DELEGATE TO THE A.M.A.—Joe L. Duer, M.D., Woodward

SPEAKER OF THE HOUSE OF DELEGATES—Marshall O. Hart, M.D., Tulsa

VICE SPEAKER OF THE HOUSE OF DELEGATES—C. M. Hodgson, M.D., Kingfisher

EDITOR-IN-CHIEF—Ben H. Nicholson, M.D., Oklahoma City

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L. B. Word, M.D.
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Perry
G. B. Gathers, Jr., M.D.
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Guthrie
Avery B. Wight, M.D.
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Shattuck
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DISTRICT #5

Ross Deputy, M.D.
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C. E. Lively, M.D.
McAlester

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Mangum
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Sentinel

Seventh Annual Southeastern Oklahoma Clinical Symposium

Highlighting summertime scientific activities in Oklahoma will be the Seventh Annual Southeastern Oklahoma Clinical Symposium, slated for July 29th in the Aldridge Hotel, McAlester.

The popular refresher course is jointly sponsored by the McAlester Clinic Foundation and the Department of Postgraduate Education of the University of Oklahoma School of Medicine.

Guest speakers and their subjects are: Jeanne C. Bateman, M.D., Washington, D.C., — "Non-Surgical Management of Malignancy"; Edwin C. Jungck, M.D., Augusta, Georgia — "Sensible Hormone Therapy"; George A. Constant, M.D., Victoria, Texas —"Getting Along With Our Adolescents"; James B. Donaldson, M.D., Philadelphia, Pennsylvania—"Medical Evaluation of Pre-Operative Patients"; and, John Todd Reynolds, M.D., Chicago, Illinois—"Diagnosis and Management of Abdominal Emergencies."

Two panel discussions will also be held. The first, moderated by Tom S. Gafford, M.D., Muskogee, will cover the subjects of Doctors Bateman and Jungck. The second, moderated by Merlin K. Duval, M.D., Oklahoma City, will include the topics of Doctors Donaldson and Reynolds.

A social hour and dinner are planned for Saturday evening, at which time entertainment will be supplied by Seymour Davis, Oklahoma City entertainment bureau. Program plans also include special events for the ladies.

Registrants will be entitled to Category II credit from the American Academy of General Practice. There will be no registration fee, since the meeting will be sponsored by Lederle Laboratories.

Advance reservations are encouraged. They may be made by contacting Jewell M. Green, Jr., Business Manager, McAlester Clinic, McAlester, Oklahoma.

'Anderson-King' Hearings Due Soon

House Ways and Means Committee Chairman Wilbur Mills (D., Arkansas) has announced that extended public hearings on the Anderson-King bill (H.R. 4222) will begin in late June or early July.

The measure proposes providing health care to Social Security recipients through an amendment to Title II of the Social Security Act. Hospital care and certain professional services for the 14.5 million persons involved would be financed by increasing payroll deductions of employees by ¼ of 1% and by increasing employer contributions by a like amount. The base for taxation would also be increased, from the present $4800 annually to $5000 annually.

In brief, here's what the legislation would do:

- First, it would provide inpatient hospital services up to 90 days in a single spell of illness for all costs in excess of $10 per day for the first nine days (with a minimum of $20) and full costs for the remaining 81 days.
- Second, it would provide skilled nursing home services up to 180 days immediately after discharge from a hospital, to provide an incentive for use of these less expensive facilities. An individual could receive two days of skilled nursing home care in place of one day hospital care.
- Third, it would provide hospital outpatient clinic diagnostic services for all costs in excess of $20.
- Fourth, community visiting nurse services and related home health services for a limited period of time would be provided (up to 240 visits annually).

The services of physicians salaried by hospitals would also be compensable.

Kerr-Mills Preferred

The American Medical Association and other groups are opposing H.R. 4222 on the basis that the recently enacted Kerr-Mills Bill makes it unnecessary. They point out that the arbitrary use of the Social Security system as a vehicle for providing health care does not take into consideration whether or

not the recipient needs financial assistance to obtain necessary care. On the other hand, the bill would deny coverage to those not on Social Security rolls, who presumably need help the most.

H.R. 4222 is believed to be a serious threat to the free practice of medicine and, in the long run, will undoubtedly lessen the quality of care available. Future expansion of the benefits and the scope of coverage will result in the socialism of health care for the general citizenry.

State medical associations and county medical societies are being encouraged to prepare resolutions in opposition to H.R. 4222. County societies should send their resolutions to the OSMA Executive Office, Box 9696, Oklahoma City, where they will be collected and forwarded on to Representative Mills.

Resolutions from other interested organizations are also requested.

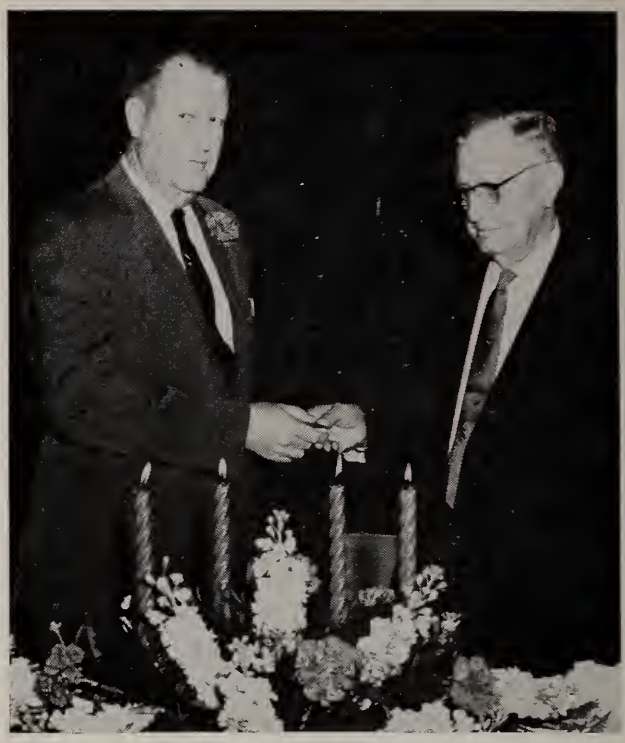
Heart Association Names Officers

Election of officers for the Oklahoma Heart Association was the highlight of the health group's annual meeting held in Tulsa on May 13.

Howard Cowan of Tulsa was elected president. Serving with him are E. C. Mohler, M.D., Ponca City as president-elect, and three vice-presidents: W. D. Finney, Fort Cobb; Hugh O. Davis, Shawnee; and W. N. Weaver, M.D., Muskogee. Secretary is John V. Morgan of Oklahoma City, and re-elected as treasurer is Joe W. McBride, Oklahoma City.

Re-elected as directors for three year terms are Ray Graybill, M.D., Ardmore; Dave J. Stevens, Durant; W. W. Blackburn, Elk City; W. D. Finney, Fort Cobb; Joe W. McBride, Oklahoma City; Jerome D. Shaffer, M.D., Oklahoma City and Gerdie R. Hurd, Stilwell.

Two delegates to the AHA were also named. They are E. C. Mohler, M.D., Ponca City and Wm. Best Thompson, M. D., Oklahoma City. Alternates are: Ray Graybill, M.D., Ardmore; Howard Cowan, Tulsa; W. N. Weaver, M.D., Muskogee; F. Redding Hood, M.D., Oklahoma City; Stewart Wolf, M.D., Oklahoma City, and John V. Morgan, Oklahoma City.



Thomasson Receives Fifty-Year Pin

At the March 28th meeting of the Stephens County Medical Society, E. B. Thomasson, M.D., Duncan physician (pictured right), was presented a Fifty-Year Pin by the Oklahoma State Medical Association in recognition of his devotion to the profession for half a century. Shown presenting the award to Doctor Thomasson is R. H. Mayes, M.D., President of the county group. Doctor Thomasson is the fourth Duncan physician to receive the award. Others are James Patterson, M.D., Fred Patterson, M.D., and Wallis Ivy, M.D.

Charter Flight to Europe Planned

A committee of the Oklahoma State Medical Association is preparing to arrange a chartered flight to Europe, provided a sufficient number of association members and their immediate families make reservations.

The committee is composed of Frances F. Newlin, M.D., Shawnee (Chairman), Francis A. Davis, M.D., Shawnee, M. B. Glismann, M.D., Oklahoma City, and E. R. Shapard, M.D., Tulsa.

Arrangements presently call for an "off season" flight, originating in Oklahoma City and Tulsa and proceeding to London and Paris. If the airplane can be filled to near-capacity, the roundtrip fare may be kept below $300 per person.

Physicians interested in the trip should contact Doctor Newlin, Masonic Building, Shawnee.



Pictured during the annual meeting of the President's Committee on Employment of the Handicapped are (left to right): Voyle Scurlock, Director, Vocational Rehabilitation, Oklahoma City; Don Davis, Executive Secretary, Governor's Committee, Oklahoma City; Representative Lou Allard, Drumright; Representative Harold Morgan, Vinita; Senator Charles E. Colston, Marietta; Senator Ralph Graves, Shawnee; Representative Grant Forsythe, Tulsa; Walter E. Brown, M.D., then President of the Oklahoma State Medical Association, Tulsa; U.S. Senator Mike Monroney; Ted Wheaton, Tinker Air Force Base, Oklahoma City; Representative William Burkett, Woodward; Ralph Bethel, President, Oklahoma Lions Eye Bank, Tulsa; Emil Marcus, Frederick; Congressman Victor Wickersham, Mangum; Sharon Davis, National Essay Winner, Oklahoma City; John Meek, Assistant to Senator Robert S. Kerr; M. E. Fariss, Sayre; Doris Taylor, English Teacher, Northwest Classen High School, Oklahoma City; Len Yarborough, AFL-CIO, Tulsa; Esther Robinson, Executive Secretary, Oklahoma Council of Teachers of English, Oklahoma City; and, Representative Henry Dolzeal, Perry.

'Handicapped' Event Opens Hearts

Opening the heart without surgery is possible. It was done for Doris Taylor of Oklahoma City in April, 1961.

It all started when Sharon Davis, one of her pupils at Northwest Classen High School, won first place in the state contest, and fourth in the national contest entitled, "Hire the Handicapped — A Community Challenge." Many state organizations, such as the Oklahoma Association of Insurance Agents, Associated Industries of Oklahoma, veterans organizations, Business and Professional Women's Clubs, federal agencies, and others, provided awards to the winners of the contest. The State AFL-CIO provided an expense-paid trip for Sharon, and the Oklahoma State Medical Association provided an expense-paid trip for Miss Taylor, teacher of the first-place winner, to attend the annual meeting of the President's Committee on Employment of the Handicapped.

At a huge meeting, with representatives from 50 states and many foreign countries, Doris Taylor had the opportunity to see one of her students receive an award from Robert F. Kennedy, Attorney General of the United States, for having placed fourth in the national essay contest sponsored by the President's Committee.

The Oklahoma State Medical Association, in providing the expense-paid trip for Miss Doris Taylor to accompany her student to this all important meeting, provided a most thrilling and exciting experience.

In addition to the usual sightseeing, fascinating enough in itself, Sharon and Miss Taylor had many other invaluable opportunities. For example, it was a thrilling moment when the governor of Michigan strode to the platform, with no assistance and without a cane or crutch, after the chairman had just announced that the governor had two artificial legs. It was most inspiring to watch Harold Russell, hero of the World War II movie, "Best Years of Our Lives," settle his glasses over his ears and to hear him say casually, "You see, I'm handicapped—I have to wear glasses"—when he was putting his glasses on with two hooks which he uses for hands. Distressing as it was to see General Maas, elderly and blind chairman of the President's Committee, collapse while speaking, it was a wonderful example of dedication to one's country, to a cause, to know that he regards his

job as important enough to make him come to the meeting though he was ill enough to stay home.

It was most satisfying to note that Oklahoma's delegation was one of the largest at the convention. Doctor Walter Brown, then President of the Oklahoma Medical Association; Miss Esther Robinson, Executive Secretary of the Oklahoma Council of Teachers of English; legislators, and representatives from Labor, Industry, and Insurance; Don Davis, Executive Secretary of the Governor's Committee; Virgil Carter, a photographer from Oklahoma City's Goodwill Industries, and others, made an impressive appearance for the Sooners.

Oklahoma was the only state singled out for recognition at the luncheon, where forty-five high school young people were given awards for winning first place in their respective states with their essays. State Legislators and the Oklahoma Governor's Committee were commended heartily by the Chairman, Mr. Gordon Freeman.

Muskogee Postgraduate Course Attended by 46

The OSMA'S final regional postgraduate course of the year, held April 18 at the Muskogee General Hospital, drew the largest registration of any of the previous meetings, with forty-six physicians attending the four-hour late afternoon and evening conference.

Speaking on various aspects of the basic science, diagnostic and therapeutic considerations of the Kidney were: John P. Colmore, M.D., Robert Lindeman, M.D., and W. O. Smith, M.D., all of the University of Oklahoma Medical Center.

Through an action of the House of Delegates, the regional courses will be resumed next fall on a one-a-month basis, beginning in September.

Registrants

Those attending the Muskogee meeting were: R. L. Alexander, M.D., Okmulgee; G. L. Berkenbile, M.D., Muskogee; Don Bernamonti, M.D., Muskogee; Bruce Brown, M.D., McAlester; George Brown, M.D., McAlester; W. L. Bynum, M.D., Muskogee; Ron Cagle, M.D., Tulsa; Charles A. Cashman, M.D., Okemah; Jess S. Chandler, M.D., Muskogee; William Z. Cook, M.D., Stilwell; R. L. Currie, M.D., Stilwell; Max A. Deardorff, M.D., Tulsa; Edward H. Fite, Jr., M.D., Muskogee; Joseph Fulcher, M.D., Tulsa; M. C. Gephardt, M.D., Muskogee; Burdge F. Green, M.D., Stilwell; James L. Green, Jr., M.D., Muskogee; B. E. Guenther, M.D., Collinsville; R. R. Hannas, M.D., Sentinel; E. M. Henry, M.D., Muskogee; Thomas Hester, M.D., Muskogee; John Hill, M.D., Tulsa; C. K. Holland, M.D., McAlester; J. M. James, M.D., Muskogee; Maxwell Johnson, M.D., Tulsa; George L. Kaiser, M.D., Muskogee; Don King, M.D., Tulsa; Albert Krause, M.D., Muskogee; E. L. Leonard, M.D., Wagoner; June May, medical student; George Markert, M.D., Tulsa; L. S. McAlister, M.D., Muskogee; Bob G. Mitchell, M.D., Sallisaw; C. T. Morgan, M.D., Tahlequah; William C. Moore, M.D., Wewoka; Bill Morris, M.D., Tulsa; Robert A. Nelson, M.D., Tulsa; C. L. Oglesbee, M.D., Muskogee; Ed L. Pointer, M.D., Sallisaw; Joseph Salamy, M.D., Tulsa; Richard Scott, M.D., Tulsa; C. E. Smith, M.D., Henryetta; G. W. Tracy, M.D., Muskogee; W. N. Weaver, M.D., Muskogee; William S. Womack, M.D., Tahlequah; W. M. Wood, M.D., Muskogee; and, Don Blair, OSMA Associate Executive Secretary.

Have You Heard?

FRANK STUART, M.D., Tulsa, is the new president of the Mid-Central Orthopedic Society. The 1962 meeting of the group will be held in Tulsa.

A. G. WEBER, M.D., Goltry, has been awarded a special service citation from the Executive Committee of the Central South Conference of the Congregational Churches.

C. E. CALHOUN, M.D., Sand Springs physician and Life Member of the Oklahoma State Medical Association, retired March 18, ending 59 years of medical practice in Oklahoma.

HARL N. STOKES, Oklahoma City personnel manager, has been named Executive Secretary of the Oklahoma Chapter, American Academy of General Practice.

House Staff Physicians Hold Annual Meeting

Richard H. Bottomley, M.D., second year resident in medicine at the University of Oklahoma Medical School, won "best paper of the meeting" honors at the seventh annual meeting of the Oklahoma Association of House Staff Physicians May 12 at the Oklahoma City VA Hospital.

He also received the award for the most outstanding paper in the field of internal medicine.

Twenty-two interns and residents presented papers during the one-day program. The house staff men also heard lectures by two guests, Katharine Dodd, M.D., professor of pediatrics at Emory University, and F. John Lewis, M.D., professor of surgery, Northwestern University.

Other awards for top papers in various fields went to: Paul R. O'Bar, M.D., radiology, J. M. Ingalls, M.D., surgery, Hugh C. Graham, Jr., M.D., pediatrics, C. Camak Baker, M.D., neuro-psychiatry, Lloyd E. Rader, M.D., basic science. All are residents at the OU Medical Center.

Edward N. Brandt Jr., intern at the VA Hospital, was cited for presenting the best paper by an intern.

Residents selected to repeat their papers at the annual meeting of the Oklahoma Chapter, American College of Surgeons, were: John H. Tatum, M.D., and Frank Clingan, M.D., both of Hillcrest Medical Center, Tulsa; Doctor Ingalls, Harold H. Mings, M.D., Frank Howard, M.D., and R. C. Emmott, M.D., all of the OU Center.

Howard B. Keith, M.D., third year resident in surgery, was program chairman and will head the association during 1961-62. Serving with him will be John Drake, M.D., second year resident in medicine, program chairman, William Price, M.D., third year resident in surgery, secretary-treasurer, and William Waskowitz, M.D., third year resident in orthopedic surgery, social chairman. All are members of the Medical Center house staff.

Awards were made by the Oklahoma City Chapter, Medical Service Society of America, Oklahoma State Radiological Society, Oklahoma Association for Mental Health, Oklahoma Chapter of American College of Surgeons, Oklahoma Academy of General Practice, Oklahoma City Pediatric Society, General Electric X-Ray Company, Greb X-Ray Company, R. P. Kincheloe Company, Merkel X-Ray Company, Miller X-Ray Company, Fred Knies, and Ansco.

SAMA Names New Officers

James Garner Jr., senior student from Stillwater, is new president of SAMA at the University of Oklahoma School of Medicine. Others elected this spring were Curtis Kimball, Canton junior, vice-president, and John Currie, Sallisaw junior, secretary-treasurer.

Mrs. Jack Harper, wife of a senior from Frederick, was elected Region VI SAMA Auxiliary director at the May convention in Chicago.

Other delegates from the Oklahoma SAMA and Auxiliary were Donald Patrick Ferrell, Amorita, and Larry Young, Ada, both juniors, and Mrs. Rex Baggett, whose husband, a senior medical student, is the outgoing Oklahoma SAMA president. Mrs. Baggett last year served as national Auxiliary second vice president.

CORRECTION, PLEASE!

Despite careful checking of association membership records and the insertion of a correction reply card in the February issue of *The Journal*, it seems inevitable that a few errors will occur in the publication of the Annual Directory of the OSMA. The association staff apologizes for its miscues, and wishes to set the record straight on the following (corrections underscored):

Fagin, Herman '00 Ok-1 '23 **I** 1200 N. Walker Oklahoma City

Horowitz, Leon '25 NY-19 '52 **Pd-Al** 4926 E 21 Tulsa

[3]Klass, O. C. '88 Ky-2 (Ob) 609 Surety Bg Muskogee

Lachman, Ernest '01 Breslau, Germany '24 **R** 801 N.E. 13 Oklahoma City (erroneously listed as retired)

Wood, Harold C. '30 Tenn-6 '56 **Ob** 208 Med Arts Bg Tulsa

Auxiliary News

Commencement

Evaluation of organizational accomplishment can be considered in the same manner as commencement. Both are, in truth, backward glances—pride in the past, coupled with expectations of the future.

In our Auxiliary commencement, State Convention culminated a year of worthwhile work, reports any state could call successful. Our two Vice-Presidents, Mrs. Milton L. Berg, and Mrs. W. A. Hyde, reported a membership of 1290. At present we have 40 organized counties, with 33 counties having members-at-large (a total of 100 members-at-large). Fourteen counties have 100% membership; and two districts, 11 and 13, have 100% membership. What a remarkable report!

Oklahoma is also proud of collecting a total of $2,003.17 for the American Medical Education Foundation. Members are gradually realizing how dollars can mount; and our State Chairman, Mrs. F. H. McGregor, has enthusiastically called our attention to future growth and possibilities of aiding our medical schools.

We wish for space, to give complete reports on the work of each committee. Watch for results of our year's progress in the next issue of *The Sooner Physician's Wife.*

Mrs. Harlan English, President-Elect of the Woman's Auxiliary to the AMA, gave us the theme for the year in the May issue of the national *Bulletin.* Her speech to the general convention elaborated this theme: Strive to make the helping hands of the doctor's wife reflect and enrich the doctor's dedicated service to mankind. One quote from her article, on which she elaborated in her speech, contains a worthwhile guide for all of us to consider: "Any progress must be nourished by right purpose, full knowledge, thoughtful planning, and honest effort."

Pages could be written about Tulsa's hospitality. We express our deep appreciation to Mrs. Eric M. White, Convention Chairman, and to Mrs. Dick Huff, Co-Chairman, for the fabulous luncheon and fashion show (poodles were the theme and naively "stole the show"). We are also grateful to every person who assisted with every event.

New Officers

Our newly-elected officers for 1961-62 are:

President—Mrs. Pat Fite, Sr., Muskogee;

President-Elect—Mrs. Milton L. Berg, Tulsa;

First Vice-President—Mrs. Peter A. MacKercher, Ponca City;

Second Vice-President — Mrs. Tom C. Sparks, Ardmore;

Secretary — Mrs. Charles W. Freeman, Oklahoma City;

Treasurer—Mrs. Louis S. Frank, Oklahoma City;

Treasurer-Elect—Mrs. C. F. Foster, Jr., Oklahoma City.

Finale

As we welcome our new officers and chairmen and wish them a rewarding year in Auxiliary work, we also wish to express our sincere gratitude to Mrs. Virgil Ray Forester, our outgoing President, and to the officers and chairmen of 1960-61. Anne Morrow Lindbergh said, "One can never pay in gratitude; one can only pay 'in kind' somewhere else in life." We hope that with our Auxiliary members, individual appreciation to our outgoing officers will be shown by constantly renewed interest in our important Auxiliary projects.

Deaths

Roscoe C. Baker, M.D.
1882-1961

A prominent Enid physician, Roscoe C. Baker, M.D., died April 18, 1961. The 78-year-old pioneer Oklahoman had been active in medical, civic and military activities since coming to Oklahoma in 1904.

A native of Clarksdale, Missouri, Doctor Baker graduated from Ensworth Medical College, St. Joseph, Missouri. After practicing in Covington, Granite and Arcadia, he moved to Enid in 1920, where his practice was interrupted only by his military service. He was instrumental in organizing the 189th field artillery which later became Oklahoma's 45th Division. Although serving primarily as a medical officer, he helped organize the *45th Division News* and served as member of the original staff.

A Past-President of the Garfield-Kingfisher County Medical Society, Doctor Baker was serving as Editor of the *Bulletin* which he founded twenty-seven years ago, and as Secretary-Treasurer of the society at the time of his death.

In 1959, the Garfield-Kingfisher Medical Society established the R. C. Baker Student Loan Foundation, simultaneously honoring Doctor Baker for the meritorious service which he had rendered to his society for many years and designing a plan to serve worthy medical students.

Recognizing his devoted service to the medical profession, the Oklahoma State Medical Association had presented Doctor Baker with dual honors—an Honorary Membership in 1953 and a Fifty Year Pin in 1955.

Robert Z. Taylor, M.D.
1884-1961

Robert Z. Taylor, M.D., pioneer physician of Blair, died on April 28, 1961.

A native of Tennessee, Doctor Taylor came to Blair to practice in 1909 after graduating from Vanderbilt University School of Medicine in 1908.

Doctor Taylor's Honorary-Life Membership in the Oklahoma State Medical Association was presented to him in 1959 in recognition of his devotion to the profession for more than half a century.

Howe King Riddle, M.D.
1890-1961

A pioneer Coweta physician, Howe King Riddle, M.D., died April 12 in Rockdale, Texas, his native home.

A graduate of Eclectic Medical College, Cincinnati, Ohio, in 1913, Doctor Riddle practiced in New Mexico before moving to Coweta in 1919.

In addition to his private practice, Doctor Riddle served as Wagoner County Health Officer at one time and later was Mayor of Coweta.

James O. Hood, M.D.,
1907-1961

James O. Hood, M.D., Director of the Student Health Service at the University of Oklahoma since 1946, died May 5, 1961 in Oklahoma City.

Born in Breckenridge, Texas, Doctor Hood graduated from the University of Oklahoma School of Medicine in 1931. After engaging in private practice in Norman from 1931 until 1938, he became Cleveland County Health Director. During this period, he also served as Mayor of Norman for three years. A Lieutenant Colonel in the Medical Corps of the 45th Infantry Division during World War II, he returned to Norman and assumed his duties at the university in 1946.

The Southern Medical Association, the American Public Health Association and the American Academy of General Practice were among the organizations in which Doctor Hood held memberships.

25 YEARS AGO



Articles published in *The Journal* of the Oklahoma State Medical Association, June, 1936.

THE MORTALITY OF ACUTE APPENDICITIS
Consideration of Preventive Measures

HORACE REED, M.D.
Oklahoma City

In a paper presented before the Academy of Medicine in November, 1932, the opening statement is as follows: "Acute appendicitis is a curable disease. If the proper remedy is applied before the inflammation spreads beyond the appendix, the cures should amount to one hundred per cent."

That statement was based on the limited experience and observation of the author. Acute appendicitis, however, occurring as it may in those who have disassociated but serious lesions, will still command treatment. These disassociated lesions may, in certain instances, be of such nature as to make surgical procedures hazardous in themselves. It follows, therefore, that while the statement above quoted may be still true in selected cases, there are complications which will eventually bring about a mortality in simple acute appendicitis.

In the January number, 1936, of Archives of Surgery, Schullinger publishes a paper in which he gives the results of acute appendicitis and associated lesions, over a period of eighteen years, in the Presbyterian Hospital of New York. Schullinger's analysis of these cases is, to me, the most enlightening expose of the subject that has ever come to my attention. His studies and his statistics have largely furnished the inspiration by which I undertake to present this paper.

Schullinger divides appendicitis into five groups. The first group is acute appendicitis without associated lesions, and he gives his definition as follows: "An acute inflammatory process confined almost entirely to the appendix in whole or in part." Out of a total of 2,653 cases 1,175 fall into this group. The number of deaths in the 1,175 cases were seven or a mortality of .59 per cent.

In group two, there were 630 cases with twelve deaths. Group two is acute appendicitis with acute local peritonitis. The mortality in this series was 1.9 per cent. Studied in progressive five year periods there is a distinct falling of the mortality rate in this group. In the 1918 to 1922 period, the rate was almost four per cent. It was more than three per cent in the 1920 to 1924 group, but from there on there is a steady decline to the 1929 to 1933 group, in which the mortality was less than one per cent. This indicates that during this eighteen year period, there has been a definite progress made in the treatment of appendicitis associated with local acute peritonitis in the Presbyterian Hospital.

The third group is acute appendicitis with peritoneal abscess. In this group there were 571 cases, total number of deaths sixty, per cent rate is 10.5. Taking again the progressive five-year period, we find that the death rate in 1918 to 1922 was fourteen per cent. The period from 1925 to 1929 was the least, having declined from the previous period to less than eight per cent; but from this group forward to the last period, namely from 1929 to 1933, it rapidly rose and in the last period it was 12 per cent; showing that at least during the last several years no progress had been made, but rather a loss had been sustained.

Group four is acute appendicitis with acute diffuse spreading peritonitis. In this group there were 329 cases, fifty-six deaths; a mortality of 17.2 per cent. The progressive five-year analysis of these cases shows no improvement in eighteen years.

Group five is acute appendicitis with acute progressive fibrinopurulent peritonitis. In this group there were twenty-five cases and twenty-two deaths, a mortality per cent of eighty-eight. There were thirteen cases in the first nine years with eleven deaths; in the second nine years there were twelve cases with eleven deaths, showing the results in the latter years are not so good as in the previous.

"The total mortality rate from acute appendicitis at the Presbyterian Hospital from 1916 to 1933, inclusive is 5.08 per cent, or 135 deaths in 2,653 cases."

Coming Meetings

STATE

Oct. 23-25—Oklahoma City Clinical. Sheraton-Biltmore Hotel, Oklahoma City.

REGIONAL

July 12-13—Rocky Mountain Cancer Conference, Denver, Colorado.

NATIONAL

June 12-14—American Neurological Association. Hotel Claridge, Atlantic City.

June 22-23—American Rheumatism Association. Hotel Roosevelt, New York City.

June 22-26—American College of Chest Physicians. Hotel Commodore, New York City.

June 25-30—American Medical Association Annual Meeting, New York City.

June 24-25—American Diabetes Association, Inc., Commodore Hotel, New York City.

November 4-5—County Medical Society Conference on Disaster Medical Care, Palmer House, Chicago, Illinois.

PHYSICIAN PLACEMENT

Anesthesiology

Richard S. Dillman, M.D., 529 Fifth Street, Ann Arbor, Michigan; age 35; married; University of Michigan, 1956; board eligible.

General Practice

Conrad Markert, M.D., Hillcrest Medical Center, Tulsa; age 31; married; University of Oklahoma, 1960; available July 1, 1961.

Leonard W. Rozin, M.D., 2740 N.W. 21st St., Oklahoma City; age 33; married; University of Kansas, 1959; now completing general practice residency at University Hospital; desires association in Oklahoma City; available July 1, 1961.

Irving Teague Staley, M.D., 4207 Givens Avenue, Memphis 17, Tennessee; age 32; married; University of Tennessee, 1960; available July 1, 1961.

Joe Allen Stewart, M.D., Box 337, Fountain Inn, South Carolina; age 36; married; University of Oklahoma, 1949; available immediately.

Floyd E. Webb, Jr., M.D., 2527 Webster Drive, Alexandria, Louisiana; age 27; married; University of Oklahoma, 1957; available August, 1961.

E.E.N.T.

August L. Stemmer, M.D., 20th Station Hospital, APO 696, New York, N.Y.; age 32; married; Harvard Medical School, 1953; board certified; Available May 1, 1961.

Industrial

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available immediately.

Alexander I. Sandecki, M.D., 115 Dunwood Lane, Route 1, Box 101-E, Joppa, Maryland; age 49: single: Linow University Medical School, Poland; available immediately.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

James Stanford Haimsohn, M.D., 3340 Poplar Avenue, Memphis, Tennessee; age 43; married; University of Tennessee, 1942; board certified; available 90 days.

Donald Sinton Hall, M.D., 8283 Marlow, Detroit 28. Michigan; age 33; married; University of Cincinnati, 1955; available August, 1961.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

Locum Tenens

University of Oklahoma graduate desires locum tenum during the months of August or September, 1961. Contact R. A. Yeakley, M.D., c/o St. John's Hospital, 1923 South Utica Avenue, Tulsa, Oklahoma.

Obstetrics and Gynecology

Philip Tabor Bennett, M.D., Quarters 739A, Maxwell A.F.B., Montgomery, Alabama; age 31; married; University of Texas Medical School, 1954; board eligible; available July 1961.

Richard W. Fenaughty, M.D., 95 Hart Street, New Britain, Connecticut; age 31; married; State University of New York, 1957; available July 1961.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

Orthopedics

Sheldon Roger, M.D., 1185 Holly Street, Denver, Colorado; age 31; married; Indiana University, 1953; board eligible; available July 1, 1961.

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Perry Merrill White, Jr., M.D., 3338 Tanglewood Drive, Augusta, Georgia; age 35; married; Baylor University College of Medicine, 1953; board eligible; available August, 1961.

Psychiatry

William L. Sherman, Jr., M.D., 201 East Kirby, Detroit 2, Michigan; age 38; single; Wayne State University College of Medicine, 1947; board eligible; available immediately.

Mary Eichhorn, M.D., 501 Fourth Street, Garden City, Kansas; age 38; single; University of Kansas, 1945; board certified; available immediately.

Preventive Medicine

Robert E. Jewett, M.D., 2820 Fairway Drive, Birmingham, Alabama; age 52; widower; Indiana University, 1934; board certified; desires administrative practice; available immediately.

Radiology

Quentin T. Brooks, M.D., 6922 Edgemoor Drive, Houston, Texas; age 40; married; Oklahoma University School of Medicine, 1953; board certified; available immediately.

Fred T. Hargrove, M.D., 217 North Pinewood Drive, Carthage, Texas; age 56; married; University of Oklahoma School of Medicine, 1934; board certified; available January 1, 1961.

Edward M. Sipple, M.D., 5935 Chinquapin Parkway, Baltimore 12, Maryland; age 40; married; University of Maryland, 1951; board eligible: available July 1. 1961.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty, broncho-esophagology and thoracic surgery; available immediately.

MISCELLANEOUS ADVERTISEMENTS

VACANCIES—1 General Surgeon, 1 Internist and 1 Admitting Physician for 390 bed Veterans Administration Hospital; Board Certified or Board eligible preferred for surgeon and internist; prefer Oklahoma licensure; salary range $7,560 to $15,030 depending upon qualifications; plus 15% additional if Board Certified, not to exceed $17,200; fringe benefits; citizenship required; preceptorship in General Surgery available. Write: Manager, Veterans Administration Hospital, Muskogee, Oklahoma.

PEDIATRIC RESIDENCY VACANCY at first year. Fully approved program in new two million dollar Children's Hospital in teaching medical center with University affiliation. State law requires U.S. citizenship and Oklahoma license (application could be made anytime). Stipend of $200 with full maintenance. Address inquiries to Leon Horowitz, M.D., care of Office of Graduate Education, Hillcrest Medical Center, Tulsa 20, Oklahoma.

WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association. P.O. Box 9696, Oklahoma City, Oklahoma.

GENERAL PRACTICE, age 29; three years experience; military service completed; Oklahoma University School of Medicine graduate; married and have children; AAGP. Desires to locate with a small group or with another man, in town of 5,000 or larger. Available immediately; would also consider solo practice. Contact Key C, c/o Oklahoma State Medical Association.

WANTED: Physician to join Clinic and Hospital Staff at Clinton-Sherman Air Force Base. Contact Col. S. A. O'Brian, 857th Medical Group, Clinton-Sherman AFB, Oklahoma. Phone Clinton, Oklahoma FA 3-2010, Ext. 326.

COMPLETELY EQUIPPED Office Space, 318 N.W. 13th Street, Oklahoma City. Rent—Lease or Sell equipment. Part time, if desired. Excellent secretarial assistant with E.C.G. and X-ray experience. Phil White, M.D., CE 5-7676.

PATHOLOGY RESIDENCIES AVAILABLE, fully approved 4 years (PA-CP). 700 bed hospital. 250 autopsies, 8,000 surgicals, 250,000 clinical laboratory tests. Staff of three full-time board certified pathologists. Full time bacteriologist. Full time Director of Medical Education. Radioisotope laboratory. Electron microscope available. Full maintenance (room and board) plus stipend from $200 monthly on. Apply Leo Lowbeer, M.D., Hillcrest Medical Center, Tulsa 20, Oklahoma.

WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

HOUSE PHYSICIANS NEEDED immediately for Tulsa's new St. Francis Hospital. Contact Key B, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma, for further information.

FOR SALE: Instruments and office equipment. Contact C. O. Epley, M.D., 1200 North Walker, Oklahoma City, Oklahoma.

FOR SALE: Good used equipment. C. P. Taylor, M.D., 1201 East 5th, Ada, Oklahoma. FE 2-4424.

OPPORTUNITY for general practitioner in Maud, Oklahoma, population of 1,400 and 6,000 in area. Located 15 miles from Seminole Hospital and 18 miles from new Pottawatomie County Hospital with good roads to each. Town was previously staffed by two physicians. Offices and utilities are free. Contact R. M. Snelson, Phone 443 or 208, P.O. Box 1277, Maud, Oklahoma.

PHYSICIAN WANTED: Laverne, Oklahoma, population 2,000, plans to build a new hospital in the near future. No practicing M.D.s in town at present. Contact Wayne Carlisle, Carlisle Drug, Laverne.

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Journal
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Editorials

Thoughts on Medical Education

In the matter of medical education the University of Oklahoma has never been an isolated entity, but is a part of the system of American Medical Education. As such, it reflects as near as is possible the concepts that are emerging as solid ones in the system. Below are abstracted a few thoughts on Medical Education — taken from a symposium on the appropriate balance between basic and clinical sciences published in a current issue of the JAMA.*

"Whether the instruction is in the laboratory or at the bedside, it is the *science* of medicine that must be taught in medical school primarily; the art of medicine is heady wine which only in the postdoctoral years can be sipped with caution, and then under the guidance of those who, from experience, understand both its power for good and its limitations. Throughout both the medical school and the postdoctoral years, there should be a purposeful and rigorous requirement for the student to refine his thought processes for presentation in clear and precise English, spoken or written.

"I view with concern a certain pseudo-humanism which is beginning to seep into medical education; the notion that good scientific training and logical thought processes are somehow incompatible with a warm heart or an acceptable bedside manner. As a group, I know of no more attractive and considerate young men and women than our medical graduates. A good knowledge of the science of medicine will lend dignity and humility to their personality, not pervert it. It is well enough to talk about the 'whole man' as a patient concept, but the high road to this objective must perforce lead first over the rough stones of cellular biology, the hard surface of biochemistry, the quick sands of medical psychology.

"Some of our uncertainties about the medical school curriculum arise from the variable quality and character of medical education in the postdoctoral period, including the intern and residence years. Were we more clear concerning the objectives and the nature of this phase of a physician's education, perhaps we would feel more secure in developing the predoctoral curriculum. The next great step in medical education is to direct our collective thinking to the problems of the postdoctoral education period. Then it will be more nearly feasible to be in balance throughout the whole span of formal medical education.

"To return to the original question that forms the basis of this discussion, in my opinion we should stand firm for the notion that medicine needs more science, not less. Physicians, like all educated men, should be aware of the great humanistic and sociological forces that help to mold our character and impinge upon our daily life. Indeed, it is imperative that the physician practice scientific medicine within that context. But it is greater scientific knowledge that has brought better health to human beings."

Thomas B. Turner, M.D., Dean,
The Johns Hopkins University
School of Medicine, Baltimore

"In short, the most effective way to eliminate the increasing cleavage between the basic sciences and clinical sciences in the medical school is to increase the strength and scope of the preclinical departments. This proposal does not involve any retreat from the responsibilities of the clinical department. On the contrary, I believe that these departments, and especially the departments of medicine, must play a very direct role not only in extending the influence of the preclinical departments but also in providing some of the faculty members who will be needed."

Lewis Thomas, M.D., Chairman and
Professor, Department of Medicine,
New York University School of
Medicine.

*The Journal of the American Medical Association, Vol. 176, No. 9.

Hypoglycemia Producing Extra-Pancreatic Neoplasms

During the past few years anatomic pathology has often been regarded as a closed frontier in medicine, as "death house pathology", and as less dynamic than clinical pathology. However, the value of anatomic pathology has always depended upon the integration of diseased body structures with diseased body function; pathologic physiology without anatomic foundation would be just as baseless as an undue emphasis on morphologic changes without consideration of their physiologic implications. Anatomic pathology has been revitalized by such new techniques as electron-, phase-, and fluorescent microscopy, and histochemistry. Constant correlation with physiology has yielded such recent discoveries as the serotonin complex in carcinoid tumors, or the aldosterone metabolism and its relation to the adrenal cortex and to cortical adrenal adenomas.

Also in the last few years, an ever-increasing number of large mesodermal, as well as of large epithelial, neoplasms has become known, which fascinatingly are associated with spontaneous episodes of hypoglycemia.[1] These tumors have no relation whatever to island cell tumors of the pancreas either in structure or in location. Their relation to hypoglycemic episodes is well established since upon their removal these episodes cease, but re-occur if the tumor re-occurs or metastasizes. The existence of these tumors is not generally well known, as is apparent in a fairly recent article by Menguy[2] on hyperinsulinism in which these tumors are not mentioned. Yet in the review article referred to[1] twenty-six cases of mesodermal and twenty-three cases of epithelial neoplasms were found to have been published, none of them related to the pancreas. The common denominator of these neoplasms is their large size and weight, the latter ranging between 770 and 9000 grams. The mesodermal tumors were located in the pleural cavity (28%) or in abdomen (72%) and all appeared to be related to either pleural or peritoneal mesothelium. Twenty per cent were classified as benign and 80% as malignant, the latter with recurrence and metastasis. The mesodermal character of these tumors is reflected in the histological diagnosis, which lists fibromas, various types of sarcomas, mesotheliomas, and hemangiopericytomas. There was no relation in any of them to the pancreas.

The pathogenesis of hypoglycemia associated with these tumors is by no means clear. Various theories were advanced, particularly those considering the universally very large size of these neoplasms, implicating glucose hunger of the tumor and abnormal glycogen storage in it. Pressure upon sympathetic nerves was assumed to be interfering with glycogen mobilization. More recently, however, an insulin-like substance was found in three cases by bio-assay methods. Such substance need be present in only very small amounts per weight unit of tumor. The very large size of the tumors makes this of physiologic significance.

Another group of large tumors, epithelial rather than mesodermal in structure, and located in either liver or adrenals, also has been known to be associated with spontaneous hypoglycemic episodes.[1] They are all classified as primary adrenal or hepatic carcinomas. No insulin was found in any of them and abnormal glycogen storage in these equally huge neoplasms with diversion of glucose has been thought to be responsible for the hypoglycemia. Two cases of peritoneal pseudomyxomas associated with hypoglycemia were included among the epithelial neoplasms.

The knowledge that spontaneous hypoglycemia can be caused by neoplasms, other than island cell tumors of the pancreas is obviously of considerable practical importance to physicians. In addition, these tumors present a challenge to discover the true pathogenesis of the hypoglycemia associated with them. As physicians become more aware of this entity many more cases will, no doubt, become known since we so often recognize only what we already know to exist. Few of us are endowed with serendipity, but one wonders how these huge tumors prior to 1954 escaped attention to such an extent that only five sporadic cases of mesodermal tumors were published between 1930 and 1949 and nine before 1930. —*L.L.*

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PRESIDENT'S LETTER



Responsibility for the Emotional Welfare of the Patient and Those Who Have Reason to be Interested

It seems reasonable to suppose that any person who is ill for any reason whatever, and who seeks medical advice, is most likely to be concerned with several questions which may be generalized as follows:

1. What has happened to me?
2. What is its meaning?
3. What should be done about it, and
4. How am I to get along?

It is suggested that these questions should be answered, in so far as it is reasonably possible, and a clear picture should be presented at least to a responsible member of the family, and probably to the patient. A very solemn and serious obligation is imposed by these questions.

In brief, of course we should apply the old adage of trying to treat our patients as we ourselves would like to be treated. Any service which omits this principle is inadequate and unworthy.

Clinton Gallaher M. D.
President

Scientific Articles

An interesting case of intestinal obstruction is presented in which a Meckel's diverticulum and appendix were joined with inflammatory adhesions forming an adhesive band type of obstruction.

Meckel's Diverticulum

HADI M. MALEK, M.D.

RICHARD E. WITT, M.D.

Hadi M. Malek, M.D., who graduated from Tehran University in 1942, limits his practice to general and thoracic surgery. He is with the U.S. Veterans Administration Hospital at Muskogee.

Doctor Malek is a member of the Texas Chapter of the American College of Surgeons and a Fellow of the American Geriatric Society.

A 1941 graduate of the University of Oklahoma School of Medicine, Richard E. Witt, M.D., is a Diplomate of the American Board of Surgery and is now Chief of the Surgical Service at the U.S. Veterans Administration Hospital at Muskogee.

Doctor Witt is a Fellow of the American College of Surgeons and the Southwestern Surgical Congress and a member of the Oklahoma Surgical Association.

MECKEL'S DIVERTICULUM and its complications present a very interesting problem in the differential diagnosis of abdominal pathologic conditions. Our case presented an unusual complication of Meckel's diverticulum.

Meckel's diverticulum is the most common anomaly of the gastrointestinal tract. Mottram and Garland[1] reported incidence at autopsy of approximately 2% in the general population. In 17,000 autopsies performed at Johns Hopkins, 124 Meckel's diverticula were found with an incidence of 0.73% as reported by Rich.[2] Jay, Margulis, and others,[5] studied the proven cases of Meckel's diverticulum at Henry Ford Hospital between the years 1918 and 1948 and found 103 cases. Of these 55 were demonstrated at operation, 48 were found at autopsy. Wilson[3] estimated that in approximately 20% of the persons with Meckel's diverticulum symptoms or complications will develop leading to diagnosis of condition at operation. Meckel's diverticulum is symptomatic more often in the young, the average age of patients in McHardy's[4] series being 19.2 years. In general it is estimated that Meckel's diverticulum is twice as frequent in males as in females.

Usually the diverticulum will lie within 91 to 110 cm. of the ileocecal valve. The experience of Jay, Margulis[5] and others is apropros. They found that 4% of the diverticula lie within the terminal 6" or 15 cm. of the ileum; 28% within the terminal 18" or 46 cm.; 72% were within the terminal

36″ or 91 cm.; 28% were found beyond the 91 cm.; and in this series one was found to be 66″ or 167 cm. above the ileocecal valve. They suggest, and rightly so, that in searching for a Meckel's diverticulum the terminal 5′ of ileum be inspected before closure.

The length of the diverticulum may be 0.5 to 8.5 cm., the average being 4.4 cm. as reported by David Schwartz.[6] The base diameter can vary from a few mm. to a size equal to that of the small bowel. The configuration of the diverticulum may be conical, saccular, vermiform, filiform, hemispheric or sausage-like. The usual criteria for identification of a Meckel's diverticulum is: (1) the diverticulum should lie on the antimesenteric border of the ileum proximal to the ileocecal valve; (2) a separate blood supply should exist in the form of a mesenteriolum; (3) the diverticulum should show all layers of small intestine. A large number of diverticula in the acute and chronic cases have a gastric type of mucosa. This can produce the gastric ulcerations and bleeding typical of gastric mucosa. It is now generally accepted that peptic ulceration is found mostly at the edge of the heterotopic mucosa and is associated with secretory function of that area.[7] In the series of Jay[5] and others, pancreatic tissue was found in three specimens; one showed well developed Islands of Langerhans.

Meckel's diverticulum may float freely within the abdomen causing no symptoms, or it may become acutely inflamed producing the symptoms of acute inflammatory process within the peritoneal cavity, or it may be attached within the abdomen producing intestinal obstruction. Greenblatt[8] offered a classification which is useful: (1) incidental, no disease, lined by small intestinal mucosa; (2) inflammatory type; nonspecific, trauma, foreign body, parasites; specific, tuberculosis or typhoid; (3) obstructive type; torsion or volvulus intussusception with diverticulum as a starting point, diverticulum knotting around intestinal bands, incarceration of a hernia; (4) peptic ulceration, hemorrhage and perforation; (5) tumor, benign, malignant and heterotopic tissue.

The symptoms and physical findings of Meckel's diverticulum are variable and they are usually the result of complications associated with Meckel's diverticulum. The most common symptoms of diseased Meckel's diverticulum is the passage of red blood through the rectum, as emphasized by Haber[9] and Jay[5] and others; evidence of an acute inflammatory process within the peritoneal cavity. A rather indefinite continuous gnawing type pain similar to peptic ulcer is noted and it is assumed that this is due to outpouring of secretions causing spastic contraction of the diverticulum. Perforation of the Meckel's diverticulum resulting in diffuse spreading peritonitis may be the clinical picture. Among the important clinical pictures of Meckel's diverticulum are those due to intestinal obstruction. This is caused by rotation of the bowel about the diverticulum forming a volvulus, or there may be adhesions with herniation of the intestine through the adhesions.

Preoperative diagnosis of Meckel's diverticulum is rather rare. Mottram and Garland[1] in 1945 reviewed the literature and reported only 25 cases were correctly diagnosed roentgenologically. These authors employed small water-barium meals which demonstrated barium collections in the mid or lower portions of the abdomen not conforming to the shape or appearance of normal bowel pattern. The density of the barium collection varied during the day depending upon the extent of its dilution with intestinal contents. The barium remained there through emptying of the small bowel. Diagnosis by x-ray is not used by many since it is difficult and unreliable due to lack of uniformity of location and size of the diverticulum.

The treatment of complications of Meckel's diverticulum is primarily surgical. Our case is interesting because the Meckel's diverticulum was adhered to the tip of the appendix producing a constriction of the distal part of the ileum causing intestinal obstruction. The Meckel's diverticulum was about 30 cm. from the ileocecal valve.

Case Report

This 68-year-old colored male was admitted to the hospital on September 5, 1960 with chief complaint of nausea, vomiting and diarrhea. For about five years this pa-

tient had been having recurrent episodes of diarrhea which subsided under medication prescribed by his family physician. He had been to the hospital on numerous occasions. previously and many diagnoses were made. Of interest in previous diagnoses was that in December, 1956 he was hospitalized for gastrointestinal complaints and diagnosis of gastroenteritis, acute, was made. At that time examinations included a gastrointestinal series, barium enema, gallbladder series, chest plate, gastric analysis and stools for occult blood. These were all within normal limits. His complaints on the present admission began about 36 hours prior to entering the hospital. He stated he had a bologna sandwich for lunch and following that he developed cramping abdominal pain. This was followed by persistently recurrent cramping pain associated with nausea, vomiting and diarrhea. His symptoms persisted and he was brought to the hospital for further observation and treatment.

Physical examination showed a 68-year-old colored male who at the time of admission was not acutely ill. There was mild pedal edema. There was a systolic murmur at the apex which appeared to be transmitted. There was a marked distention of the abdomen with some tenderness over the epigastric region. Bowel sounds were active with a high pitch.

Laboratory examinations on 9-5-60 revealed W.B.C. was 12,600 with 90% neutrophils, 8% lymphocytes and 2% monocytes; R.B.C. 4,450,000; hematocrit 46; hemoglobin 14.2 grams; bleeding time 2½ minutes and coagulation time 11½ minutes. Urinalysis showed 3+ albumin, many granular casts and occasional white blood cells. On 9-6-60, W.B.C. was 6,000 with 69% neutrophils, 4% bands, 24% lymphocytes, 2% monocytes and 1% eosinophils. Microflocculation was nonreactive. Chlorides were 98 meq/liter; sodium 142 meq/liter; potassium 4.2 meq/liter.

A chest film showed calcified plaques in the aortic knob; heart was not grossly enlarged and lung fields were clear. Abdominal films on 9-5-60 showed multiple distended loops of small bowel and long air-fluid levels in the distended loops indicative of a mechanical obstruction. Only a small



Specimen showing open appendix with open Meckel's diverticulum and area of dense fibrous adhesions between.

amount of gas was seen in the right portion of the colon. Abdominal films on 9-6-60 showed a mechanical small bowel obstruction as previously described. Electrocardiogram was read as within normal limits.

At operation the appendix was found to be adhered to a Meckel's diverticulum, which was about 30 cm. from the ileocecal valve, making a band which constricted the ileum. Proximally the ileum was distended. The appendix was freed and the appendix and Meckel's diverticulum were excised.

Pathological report on gross description showed specimen consisted of an irregular shaped portion of tissue which measured 7 x 1.9 x 1 cm. It was made up of an appendix which had been fused to a diverticulum. The appendix proper measured 5 x 0.8 cm. The fusion occurred at the tip of the specimen. The diverticulum measured 2 x 1 x 0.9 cm. The mucosa of both the diverticulum and the appendix appeared to be intact. The fusion was produced by fairly dense, fibrous adhesions and there was considerable hemorrhagic discoloration of the serosa in this area. A section through the junction of the diverticulum and the appendix was preserved for microscopic study.

Microscopic examination revealed that the mucosa of the appendix was intact. There

was considerable deposition of fibrous connective tissue and adipose tissue within the lamina propria. A small diverticulum-like structure was in the plane examined, lined by somewhat incomplete mucosa, but this was more artefact than actual ulceration. The two were adherent to each other by dense, fibrous adhesions. In the subserosal tissues of both there were dense infiltrations of mononuclear inflammatory cells with some hemorrhage on the surface. It was difficult to ascertain whether this inflammatory reaction was primarily in the appendix or in the diverticulum. The inflammation was of extreme low-grade activity. There was no evidence of neoplasm. Diagnosis: Appendix and Meckel's diverticulum, with dense fibrous adhesions between them, and with focal subserosal inflammatory reaction and scarring.

This patient made an uneventful recovery.

Summary and Conclusion

1. A discussion of some of the literature relative to Meckel's diverticulum is presented.

2. An interesting and unusual case of intestinal obstruction due to adhesions between a Meckel's diverticulum and the tip of the appendix is presented.

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Legislative Roundup

H.R. 6027 has been cleared by House and Senate conferees, thus assuming passage. It will increase minimum social security benefits to $40 a month, raise widows' benefits to 82.5% of the insured workers retirement benefits, lower retirement age of men to 62 (at 80% of what would be received at 65) and generally ease eligibility requirements for OASI. It will be financed by a ¼% boost in Social Security taxes.

H.R. 4222 (the King-Anderson bill) will come up for committee hearings this month in the House Ways and Means Committee. The AMA and key state medical societies (with representatives on the committee) will testify against providing health care to social security beneficiaries, as the measure provides. A fair test for the Kerr-Mills bill will be sought before any additional legislative action is taken.

S. 1552. AMA representatives were leadoff witnesses on the Kefauver Drug Bill when hearings of the Anti-Trust Subcommittee were begun on July 5. The bill seeks to limit patent rights on drugs, requires more use of generic instead of trade names, and requires Federal testing of the efficacy as well as the safety of new drugs.

Chronic Alcoholism

EDITED BY

Thomas N. Lynn, M.D.*

PARTICIPANTS:

Moderator, Robert M. Bird, M.D.**
Case Presentation, Eugene E. Smith, M.D.***
Presentation of x-rays, John Owens, M.D.+
Discussion, L. J. West, M.D.,++ and James F. Hammarsten, M.D.+++

Chief Complaint: Pain in the jaw intermittently of three days' duration, and chronic alcoholism of about 20 years duration.

*Present Illness*s The patient is a 46-year-old male who was in his usual state of health until three days prior to his admission. At that time, during a period of increased alcoholic intake, he fell down a flight of stairs and was unconscious for a period of approximately five minutes. He continued drinking and one day prior to admission, he again fell down a flight of stairs but did not lose consciousness. On the day of admission he was seen at another hospital and referred here. On admission he was seen by the Oral Surgery service where a diagnosis of bilateral fracture of the body of the mandible was made. That evening he had a grand mal seizure and postically had bilateral Babinski responses. The past history is remarkable only in that since childhood, during febrile episodes, the patient has had hallucinations. The review of systems is non-contributory except for a history of having had syphilis in 1940 and gonorrhea in 1943.

Family History: The patient felt that his father had "some type of mental disorder." One sister is a registered nurse and has been hospitalized on several occasions for barbiturate habituation. One brother has been hospitalized since World War I for "schizophrenia," and another brother is an alcoholic.

Social History: The patient was born the youngest of twelve children to a wealthy Irish family. His father was a very stern and domineering person who gave very little praise for things well done by his children and was continuously comparing his children with those of his neighbors. He was feared and respected by all in the family including the mother. The patient could express no real love for his father but felt his mother to be kind and considerate. He took his first drink of alcohol at age nine. By the time the patient had reached early adulthood, most of his brothers and sisters had left home and he was forced to do most of the housework and care for his parents. He did quite poorly in school, quitting at the age of 16 while in the tenth grade, and left home. He soon began to have an increased alcoholic intake and became very bitter because he was unable to learn a trade. He married a showgirl at the age of 24. The marriage lasted approximately three years and terminated in divorce because his wife was "running around." Following this, his drinking increased to as much as two to three pints a day along with several beers. He has been working as a cook since then. Currently, he works at odd jobs during the summer and cooks during the winter. He lives alone in a one room apartment and has no hobbies but drinking.

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Physical Examination: Blood pressure 120/80, pulse 88, respirations 16. The patient is a thin white male who is poorly nourished but neat and friendly. He answers questions quite frankly and easily. There are ecchymosis about the eyes, anterior neck, shoulders, and the legs. There is swelling and tenderness of the jaw, especially on the left side. The only other positive findings are occasional scattered expiratory wheezes in the lungs, questionable testicular atrophy, a fine tremor of the outstretched hands, and weakness of the left upper eyelid which has been known to be present since childhood.

Laboratory: The hemoglobin, hematocrit, prothrombin time, serum bilirubin, total serum protein and A/G ratio, alkaline phosphatase, cholesterol, BSP retention in 45 minutes, transaminase studies, urinalysis, blood urea nitrogen and fasting blood sugar are all within the limits of normal. The VDRL is positive, and the serum magnesium is 1.85 mEq./L with the normal being 2.05 mEq./L. His thymol turbidity is 0.6 units and his EEG is normal.

Hospital Course: His hospital course has been uneventful. The only therapy he has received has been multiple vitamins and a soft high protein diet.

Doctor Robert Bird: Doctor Owens, have you some films on this gentleman?

Doctor John Owens: The first film is a PA view of the skull and on this view, fracture lines through the mandible are apparent but the remainder of the skull appears normal. The oblique skull views perhaps show the fracture lines more clearly. The lateral views show a sella turcica which is at the upper limits of normal in size, but otherwise unremarkable. The Water's views show some clouding of both maxillary sinuses that is due to thickening of the membranes. The right frontal sinus is clouded and there is some sclerosis about the sinus which indicates that this is an old process. The ethmoid sinuses on the right are also cloudy. The chest film shows a normal heart, lungs and osseus structure and very small amount of pleural thickening, but this is not at all impressive.

Doctor L. J. West: It's really extremely difficult to separate the psychologic aspects of alcoholism from all the other aspects. We must attempt to formulate a rational understanding of alcoholism as a disease, which can only be done through analysis of a number of different etiological variables that may be operative in all cases and that can be present in varying portions in each individual.

In the good old days of descriptive medicine, there used to be much said about the characteristic physical appearance of the alcoholic. Just to take one single item, body hair distribution was often cited, and clinicians who saw many alcoholics in places like Bellevue Hospital lined them up to take the students down the row to show that alcoholics do not have the ordinary masculine distribution of body hair. The fact that there are also many non-alcoholics who have similar hair distribution didn't alter the fact that this was a clinical impression and a valuable one. The appearance of very hairy alcoholics didn't alter the impression either.

Essentially the same thing can be said of the alcoholic temperament. How can we account for the presence in an individual of a temperament which makes him more susceptible to habituation? This habituation may be to alcohol or other sedatives, depending on factors of availability, exposure, socio-cultural influences, etc. In this country, alcohol is readily available to the average individual and most people are exposed to it during the usual course of events. Thus, habituation to alcohol is more frequent than habituation to other sedative chemicals.

Alcoholism is extremely common, alcoholics probably numbering five million in this country. Certainly there are one million who are sick enough to be grossly obvious to the medical profession, and an additional four million people suffer from a major drinking problem. Since it's so common one would think it would have been possible by now to analyze, either by demographic methods or otherwise, the nature of family factors, cultural factors, or individual psychologic development factors that would correlate with the occurrence of the disease. Then we might be able to recognize some of this mysterious essence which goes into making

up that "temperament" which is more susceptible. I am ashamed and sorry to say that such data are not yet available. We don't even know exactly what ethyl alcohol does in the brain, and there is even some question as to whether the influences on the nervous system which are essential to producing the desire for alcohol are direct, (i.e. due to the primary effect of alcohol as it is absorbed into the blood and distributed into the nervous system), or indirect, (i.e. mediated via changes in the endocrine glands). Furthermore, there is some question about how much of what we recognize as "drunkenness" and "hangover" and perhaps also part of the alcohol addiction syndromes, are due to ethanol *per se* and how much are due to congeners and other chemicals present in alcoholic beverages.

We don't know why some people respond differently to alcohol than do others. It's easy enough to say that alcohol is "a substance that dissolves the super-ego" or that it is a depressant which diminishes one's control so that more basic personality patterns emerge when one is under its influence; these are glib but merely approximately descriptive phrases. The nature of the individual differences must yet be demonstrated. These individual differences in reactivity to alcohol are important, because the person who becomes alcoholic is someone for whom alcohol does something special. It does something so special for him that it develops a tremendous meaning in his life; but there are many other people who use alcohol for whom this relationship never develops.

Then there's the nature of the addiction. Why is it that some people become addicted so much more easily than do others? What is the nature of addiction to alcohol? Is it the same as addiction to narcotics (involving the triad of habituation, tolerance, and withdrawal syndrome) or is it pure habituation? Are the symptoms of addiction that seem to be present, such as tolerance, withdrawal syndrome, and the rest, more apparent than real and not really a part of the alcoholic phenomena? My own impression is that there are some alcoholics who are definitely addicts, but whether most alcoholics meet these criteria, I'm not prepared to say at this time. Certainly it's difficult to define the episodic "bender" type of alcoholic as an addict.

Then there is the whole aspect of the reverse of the psychosomatic approach which has been much neglected and which is only recently becoming a matter of some interest again. This "Somato-psychic" viewpoint focuses on the ways in which biologic, bichemic and physiologic aspects of the human apparatus influence mental happenings or the temperamental picture. Is it possible that the fundamental disorder in alcoholism may be on a chemical basis, and both the drinking and other behavioral and temperamental signs to be manifestations of this more basic flaw in the individual? What might the nature of such a characteristic be? Some of the most interesting recent work along these lines has been done by Roger Williams, professor of biochemistry at the University of Texas, two of whose books at least I think you all will recall: *Free and Unequal* and *Nutrition in Alcoholism*. The latter describes the effects of varied diets upon rats in terms of their development of "craving" for alcohol. The normal laboratory rat on a normal laboratory diet will not touch alcohol, but if he is put on a vitamin deficient diet, he will begin to use alcohol and apparently develop a craving for it. By studying differences between standard strains of rats having a common physical appearance, it was possible for Williams and co-workers to analyze the efficiency with which the different strains were able to extract trace elements from their food. Using paper chromatographic methods, they were able to show that there are some rats that are extremely efficient at extracting and metabolizing trace substances, vitamins and salts from food. These "efficient" animals were very difficult to make alcoholic. Other strains would show an abnormal desire for alcohol while on a standard diet, but this could be prevented by raising the vitamin levels in their diets. Furthermore, the resistant strain could be made alcoholic by lowering the vitamin levels in their (isocaloric) diets. Such "strain differences" may prove to be important to our understanding of alcoholism as a disease in humans.

The extent to which predisposing characteristics may be hereditary has also been suggested by the twin studies of Doctor Franz Joseph Kallman at Columbia University. Kallman has compared the rates of development of chronic alcoholism in identical twins as compared with fraternal twins, feeling that hereditary endowment will be the only variable. He finds (as he has found in practically all identical twin studies) that if one twin is alcoholic the identical is much more likely to become so than is the case with fraternal twins.

Purely socio-cultural influences upon temperament have also been cited as being of great importance. The patient presented today is a Roman Catholic and a chronic alcoholic; chronic alcoholism is more common among Catholics than Protestants in *Boston*. However, it is less common among Catholics than Protestants in southern California. The apparent reason for this is that in Boston the Catholics are mostly Irish and alcoholism is quite common among the Irish, whereas in southern California the Catholics are mostly of Latin extraction and alcoholism is less common among people of the Mediterranean origins than Northern Europeans. Apparently in Europe alcoholism is almost a matter of latitude. The alcoholism rate is low in the southern part of Europe. The farther north one goes in Europe, the higher the alcoholism rate becomes; in the Scandinavian countries it is the highest of all, even higher than in Ireland and the United States where it is very high indeed.

But perhaps these differences are less a matter of climate or latitude than of culturally determined differences in temperament among these people. The Scandinavian is a rugged individual who does not show his emotions freely and in whose family, social and religious life, self-control, stoicism, and a grim refusal to give vent to his feelings is characteristic. The Latin peoples on the other hand are quite spontaneous, volatile, and express their feelings easily and quickly. Even the attitudes toward their religion are quite different; differences between Catholicism among the Italians and among the Irish, and the relation of these differences to drinking patterns, have been the subject of some scientific discussion.

Among the classical psychoanalytic discussions of addiction-proneness are those of Sandor Rado, who defined the pharmacothymic personality in terms of chronic tension and depression. Others have portrayed the alcoholic as a latent homosexual individual whose passivity is a very prominent part of his life, and who is unable to come to grips with this. He has been seen as an individual who is libidinally arrested at the oral level and who is literally returning to the bottle and to the sensations attendant on nursing through the use of alcoholic beverages. His desire or craving for alcohol represents his inability to break away from this pattern.

Some studies, such as those of Diethelm and Sherfey, have involved an attempt at biochemical correlates of certain emotions that appear to play a prominent part in the alcoholic's psychopathology. The build-up of tension and resentment, together with the failure to recognize them and hence failure to deal with them in a healthy way, may cause the patient to turn to alcohol. The accumulation of cholinergic substances in the blood has been observed in connection with these emotions by Fleetwood and others.

It is possible to find in any given case some kind of evidence to support almost any view. The patient presented today does not have much hair on his chest. He is an Irish Catholic. His father and brother are mentally ill, a sister is an addict, another brother alcoholic. The patient is a passive, compliant kind of individual. Latent homosexuality may figure in his failure in the masculine role. He doesn't recognize his own obvious resentment and has no way to deal with it. He has demonstrated some degree of physiologic addiction to alcohol by the fact that he had a convulsion following withdrawal.

These clinical data remind us that without a rational etiology, without a rational pathogenesis, we cannot enjoy rational treatment for alcoholism or anything else in medicine, and must struggle with empiric therapies. If we are truly cognizant of multiple etiologic factors, therapy must be related to their precise definition. We must consider whether hereditary predisposition can be genetotrophic in the way it is transmitted,

or whether it can represent some more fundamental individual difference in the nervous system, or some combination of these; plus cultural factors; plus individual psychologic factors; plus the factor of exposure to alcohol and what the alcohol comes to mean; plus the development of addiction. All of these things add up to a given person to a kind of unwieldy syndrome we call alcoholism. Is it likely that any single treatment which is aimed primarily at one of these many etiologic factors will be successful equally in all cases? When we see where treatment A or treatment B or treatment C is effective only in about 25% to 35% of alcoholic patients, it is not necessarily wise for us to say, "Well, that's all the results that anybody ever gets with any treatment of alcoholism, therefore, the treatment is irrational or nonspecific," or, "we are seeing a placebo effect." Yet the treatment might be quite helpful for certain patients who may then get lost in the statistical shuffle. We aren't going to know whether or why some of our present empirical treatments are effective until we develop a more scientific understanding of pathogenesis.

In the treatment of this particular man and patients of this kind, one's best approach is to insist on treating the patient's illness as a medical problem. An individual may demur and say he doesn't want to be helped, but chances are he does want help, just as any sick person wants help. The fact that he also wishes to continue exposing himself to alcohol is similar to other problems that physicians face all the time, and should not be the basis for rejecting the patient. The obese person wants to go on eating; the patient with hives wants to eat strawberries; the diabetic wants to break his diet; the ulcer patient wants to plunge back into his old life situation; nobody wants to take unpleasant medicine. I have found the best approach to be some version of the following: "You are a chronic alcoholic. You are ill, and drinking is part of it. Let us both accept this. I'm going to help you. I accept the fact that you will want to go back to drinking and all the rest but I shall still try to help you." The next step is to see what treatment works the best.

At this moment, to the best of my knowledge, statistically the most successful single event in the arrest of alcoholism is religious conversion. A person who undergoes religious conversion, as a part of which he eschews the use of alcohol, is more likely to remain sober than anybody who undertakes treatment. The symptoms of chronic alcoholism will not arise, at least in major form, in people who do not take a drink; and the determination not to take a drink following conversion is quite strong.

Alcoholics Anonymous (AA) is an organization with which every physician should be familiar. Their approach to the alcoholic patient is an excellent one. They violate all the rules of individual dynamic psychotherapy. They permit the patient to act out; they lay on hands; they become emotionally involved; they make house calls *ad lib* in the middle of the night; they say, "My troubles are as bad as yours." The result achieved by breaking all rules happen to be better than the usually published results of treatment by physicians of an unselected series of cases. The probable reason that AA reports so many cures (over 50%) is that the responsibility for the decision to stop drinking is the patient's, and he must make the initial contact.

To a certain extent reported results of medical treatment of alcoholism are spuriously low. Their series include cases unready for treatment, and have mostly been associated with a single or standard therapeutic regimen. But there are a great many possible medical approaches to this problem. Those who view as significant the metabolic differences between the alcoholic, and other patients, have attempted treatments that seem to be rationally based upon these metabolic differences. Lovell and Tintera have described good results with a special diet. There have been a variety of treatments aimed at making it impossible or difficult for a person to drink, ranging all the way from locking a person up in a place where he can't get at it, to conditioning a revulsion to alcohol, which is easily done but not necessarily enduring. The continuous administration of Antibuse (tetraethylthiuram disulfide HC1) results in the release of acetaldehyde into the blood of a person who drinks alcohol, with consequent severe nausea.

In all of the various treatments of alcoholism which are based upon a prohibition of its use, a certain number of acute psychotic breaks occur and the therapy is blamed. My impression has been that such illnesses may be acute brain syndromes or previously masked psychoses. It is extremely difficult to be sure without having followed the case. I merely cite this to show that the treatment of alcoholism is not merely a simple prohibition of the use of liquor, even if one could succeed in doing this.

Other psychologic problems are bound to arise in a person who is psychologically disturbed so much that he is willing, as is this patient, to go on administering to himself a substance that he knows is destroying him. What this self-destructiveness means I can't say. In the United States we have five million alcoholics, but only twenty thousand proved suicides a year. Yet there can be no question in any doctor's mind that there are some people who seem deliberately to be destroying themselves as fast as they can with alcohol. How are we going to treat such cases? By helping them to feel that life might once again have some savor? Perhaps each patient must be approached in an individual way, and I think it's important for the physician to do it. You can approach him with diet; you can approach him with hormones; you can approach him with vitamins; you can approach him with Antitibuse; you can approach him with drugs that affect the central nervous system and diminish his reactivity to the stresses and strains of everyday life; you can approach him with practical psychotherapy; with psychiatric referral; with support to become involved in AA or other types of group therapy, individual psychotherapy or psychoanalysis; with guidance into the hands of an appropriate clergyman; when everything else fails, with unfailing kindness. The only thing that the physician must not do is turn his back upon the alcoholic patient, and accept at face value the statement "I don't want your help," thereby leaving the sufferer to his own destruction.

Doctor Bird: Is it feasible for a general practitioner to treat these patients, or do you think a psychiatrist should be doing it?

Doctor West: In most cases a psychiatrist should not be doing it. There's no reason to think that psychiatrists are so extraordinarily successful with alcoholics that no one else should attempt treatment. As a matter of fact, statistics show quite the contrary. I feel that if the general physician accepts the alcoholic as a patient, and makes a commitment to him as a patient, his chances are as good as, or better than, the specialist's. When he makes a referral, it should be for a specific reason in a specific case.

Doctor Bird: Is there a difference between alcoholism and other disorders we generally lump as social disorders or psychopathic traits?

Doctor West: The attempts to classify alcoholism according to personality types, or the nature of the basic personality disorder, always end up something like this: (1) A certain percentage of alcoholics are *neurotic*, and these we call compulsive drinkers. (2) Other alcoholics are really psychotic, usually schizophrenic, and are using alcohol in an attempt to keep their symptoms under control or to escape from them. (3) A third group of alcoholics are emotionally unstable, impulsive, immature, and happen to become drunkards; these are psychopathic personalities or character disorders. (4) Finally, there's a group that doesn't fit into any classification, and doesn't seem to have any significant psychiatric disorder other than addiction to alcohol or profoundly disturbing periodic drinking bouts; these have been called "essential" alcoholics. The fact of the matter is that in the ranks of the alcoholics one may see a gamut of psycho-pathology from normal personalities through the range of all personality disorders. I for one have never been satisfied that there is a single alcoholic personality type.

Doctor Bird: I wonder if you would define an alcoholic for us.

Doctor West: There are many definitions of alcoholism. The one I prefer is rather broad and inclusive, but I have found it to be useful: A person is a chronic alcoholic when the use of alcohol is interfering with a successful life (whether it be physical health, personality function, family or social aspects that are most affected) and he either will not

face the fact that this is so, or else cannot stop using alcohol even though he is aware of its disastrous effects on him. This definition includes the steady drinker and the episodic drinker; it includes the individual whose alcoholism doesn't seem to be interfering with his performance on the job, but whose family is breaking up. It's quite inclusive.

Doctor Bird: Now this patient, incidentally, also exhibited for us a problem which is common among those who have had alcohol intake over a long period of time and that is the "withdrawal seizure."

Doctor James Hammarsten: I would like to talk about shakes, DT's and rum fits, and present some evidence suggesting that magnesium may be related to these disorders, at least to the first two. It is known that alcoholics, when they are admitted to hospitals, frequently have been vomiting, many are dehydrated, they may have abnormalities of sodium, of chloride, and that they may be deficient in potassium. All of this is true. None of these deficiencies, however, in other patients will produce symptoms resembling shakes, delirium tremens or rum fits. In contrast to this, tremor, hallucinations and convulsions have all been described in magnesium deficiency. (1) In studies performed by a Doctor Ed Flink at Minnesota, he first showed that the serum magnesium in a group of alcoholics coming on with tremor and delirium or with tremor without delirium was lower than normal. This was the first evidence that there may be magnesium deficiency present in alcoholics who present with these symptoms, although in the past, magnesium sulfate had been used empirically in the relief of such symptoms. It has been found that a rise in the serum magnesium level occurs in the hospitalized alcoholic eating a normal diet, and that this rise corresponds closely in time with the disappearance of their symptoms. It was also found that about half of the patients with delirium tremens have serum magnesiums falling within the normal range. Despite this, it appears that these patients improved with the administration of parenteral magnesium. It is well known that magnesium is predominantly an intracellular cation and one might then suspect that if a patient were depleted, he could have marked depletion and still have a normal serum level such as may occur with potassium. There has been some evidence bearing on this particular point. Using red blood cells, Doctor W. O. Smith and I[3] showed that even though the plasma magnesium levels were low or normal, the red blood cell magnesium was uniformly low and that with magnesium therapy, this cellular magnesium level rises to normal values. This is at least some evidence confirming an intracellular deficit in patients with delirium tremens.

Doctor Flink[4] had done another interesting study in which he used alcoholics who had tremor but without delirium, and normal controls. They were fed a constant diet containing a known amount of magnesium, and on this diet the normal controls were in negative magnesium balance. In contrast to this, the alcoholics with tremor were in positive magnesium balance but the alcoholics were retaining a significantly larger amount of magnesium than were the normal controls. Again this study confirmed that there was a total body deficit of magnesium in these patients.

Flink[5] has performed a controlled study on the treatment of delirium tremens with magnesium sulfate showing that in the treated group, tremor disappeared in 65 hours and in the control group in 105 hours; this is significantly different. Visual hallucinations lasted only about half as long in duration in the treated group as opposed to the control group and again this was significantly different. A delay in improvement following the administration of magnesium has been reported by others and has been observed by us. I think delayed improvement would make sense if the important deficit is an intracellular deficit since we have shown by using Mg 28, that magnesium moves into the cells rather slowly. I think this suggests that at least one of the important features in patients with delirium tremens is a magnesium deficiency. I'm certain that it is not the entire answer to the problem.

Could the convulsion that this man had be on the basis of magnesium deficiency? We have observed convulsions in people who had magnesium deficiency due to other causes so I think that it is possible. In addition to

this, one other consideration is hypoglycemia. In three alcoholics with only mild liver disease that we have seen, we found blood glucose levels as low as ten milligrams % during a convulsion. Evidently hypoglycemia may occur in alcoholics and may be a cause for some of the seizures. We have not had the opportunity to obtain magnesium levels at the time of the convulsion in any patients and this, obviously is evidence that should be obtained. In regard to the question or the comments that both Doctor Bird and Doctor West made, that the convulsion is a withdrawal symptom; over half of the patients will still be drinking at the time they develop their symptoms, so the symptoms may develop after withdrawal of alcohol but they may develop while the individual is still drinking. The patients that I've seen where convulsions developed after the withdrawal of alcohol, were people who were vomiting or individuals with a complicating illness and who did not begin eating at the time. I've never seen an instance of delirium tremens in a patient who either began eating when he stopped drinking or who was given parenteral fluids containing magnesium at the time that alcohol was withdrawn. So that it is possible, I think, in some instances that withdrawal is important but it is not a necessary feature of the disorder of delirium tremens. One study was concerned with the possibility that vitamin deficiencies might be important in these symptoms. One man was given adequate amounts of thiamine, adequate amounts of nicotinic acid and adequate amounts of whiskey while in the hospital. This patient developed delirium tremens while receiving these vitamin preparations. In addition to this, the improvement that has occurred after the administration of vitamins in these circumstances has not been striking. I am certain that alcoholics do have vitamin deficiencies but I'm not certain how important they are.

Doctor Robert Schneider: Would you comment on the balance studies with magnesium in relation to other ions and the influence of adrenocortical steroids on magnesium?

Doctor Hammarsten: As I said earlier, I think there are some alcoholic patients who have deficits of other anions and cations but as near as I know this has not been a consistent finding in all patients. Many of them had been vomiting, and they are going to be deficient in various electrolytes. There is a relationship between magnesium and calcium. They antagonize each other; for instance, the patients with hypercalcemia will have a low magnesium but I not know of any specific relationship with other cations and anions. In regard to the effects of steroids, we have done a few studies and have shown no effect. There is, however, scattered evidence that some relationship may exist between magnesium and aldosterone but this has not been too carefully studied. Steroids have been used in the treatment of delirium tremens and so have a lot of other things. Patients in general recover spontaneously from delirium tremens, the mortality rate being variously stated to be from 2 or 3% up to 30%. Obviously the mortality rate depends to a considerable degree on the complicating illnesses. We are dealing with a disorder where if the patient receives good general nursing, general care and an adequate diet, he is going to recover. So I think that any study that attributes any effectiveness to any treatment needs to have a control group.

Doctor Bird: How is magnesium transported in the serum?

Doctor Hammarsten: It is somewhat similar to calcium in this respect. It is bound to protein but to a lesser degree, about 25% is bound.

Doctor Bird: I think this has been a very profitable discussion and I want to thank our two discussants very much and we stand adjourned.

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The right thoracic duct was studied in controlled animals and animals with acute mitral stenosis. There was a slight increase in fluid content following acute constriction of the mitral valve.

Lymphatic Drainage in Acute Mitral Stenosis*

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THE LYMPHATIC SYSTEM has been one of the more common areas of neglect in biologic studies. This is particularly true of the right lymphatic duct. A technique for cannulations of the right lymphatic duct was presented in 1942 by Warren and Drinker[1] but few studies have utilized this procedure.[2]

Our interest in the flow and chemical composition of the right thoracic duct developed during the course of studies on induced supravalvular mitral stenosis in dogs.[3] The present study is concerned with the effect of an acute constriction of the mitral valve on lymph flow and composition from the right thoracic duct in dogs.

Material and Method

Eighteen mongrel dogs were used in these experiments. They were caged separately and fed the usual animal house diet. Nine animals served as controls while the remaining nine had a previous supravalvular mitral stenosis.[3] These latter animals had a slight degree of stenosis of the mitral valve area initially and were subsequently acutely constricted.

In all animals, narcosis was accomplished by the intravenous injection of pentobarbital (30 mg./kg.). Positive pressure respirations were maintained throughout the entire procedure. A cardiac catheter was inserted into the distal bronchial tree and 7 cc. of 0.5% T-1824 was instilled. After a period of one hour, the right lymphatic duct was exposed by a right paramedian incision of the neck.

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None of the animals underwent a thoracotomy. After some experience, the exposure of the right lymphatic duct was easily accomplished by virtue of the blue staining produced by the T-1824. There was a large lymph node approximately 1 cm. below the entrance of the right thoracic duct into the venous system. The efferent lymphatics from this lymph node varied markedly in number and in their entrance into the venous system. The efferent channels would enter the right subclavian, the right innominate or the right external jugular vein. However, in the majority of the experimental animals, the efferent channels formed a fairly large duct which entered the upper outer corner of the junction of the external jugular and subclavian veins. This duct was cannulated by a polyethylene catheter

(PE50) containing a drop of heparin to prevent clotting of the lymph during collection. The fluid was collected for hourly intervals in calibrated centrifuge tubes. The rate of flow was interpolated to ml./kg./hr. The fluid was analyzed for cell count. Total protein, albumin and globulin fractions were determined by the Biuret method. Sodium and potassium concentrations were determined with the Coleman Model 21 Flame Photometer. Chlorides were measured by titration.

Lymph was collected from the right thoracic ducts of control animals for two hours. The animals with a supravalvular mitral stenosis underwent a right sided cardiac catheterization and the pulmonary pressures were recorded on a Sanborn Polyviso Carrier Preamplifier 150 while the catheter was in the pulmonary artery. Lymph was collected from these dogs for an interval of one hour at which time an acute constriction of the mitral valve area was accomplished.[3] Lymph was then collected for another hour and compared with that of the previous hour as well as with that from the control animals. It should be pointed out that the majority of the animals with supravalvular mitral stenosis had an elevated mean pulmonary artery pressure at the onset of the experiments due to partial narrowing of the mitral valve area.

In three control dogs, the branches of the right lymphatic duct were ligated and the animals were allowed to survive six months. Microscopic preparations of the lungs, regional lymph nodes and right lymphatic duct of these animals following acute constriction of the mitral valve area were studied.

Results

The results of these experiments are recorded in tables 1 through 4. The rate of flow in the control animals averaged 0.10 ml./kg./hr. The dogs with supravalvular mitral stenosis demonstrated, prior to acute constriction, a flow of 0.11 ml./kg./hr. The lymph flow increased to 0.14 ml./kg./hr. following acute constriction of the mitral valve area. There was an absolute correlation between the rate of lymph flow in the right thoracic duct and the mean pulmonary artery pressure except in one animal. Table 4 depicts this correlation.

There was a wide range of values of protein content between the control and experimental groups as well as among the animals of each group (tables 1, 2 and 3). No comparison of the serum and lymphatic protein contents was done. However, it was noted that the protein content of the right lymphatic duct was much higher than we expected. After acute constriction of the supravalvular areas, there was a consistent drop of total protein, albumin and globulin fractions. Prior to the acute constriction of the supravalvular area, total protein, albumin and globulin averaged 7.2 gm.%, 4.2 gm.% and 3.0 gm.% respectively. These dropped to 5.6 gm.%, 3.2 gm.% and 2.4 gm.% respectively after acute constriction of the supravalvular area.

The cells, predominantly lymphocytes, showed an extremely wide range of values in both control and experimental groups. No appreciable difference was observed in the electrolyte concentration in the two groups of animals.

One of the three dogs surviving for six

Dog	Weight Kg.	Lymph Flow Ml/Kg/Hr.	Total Protein Gm/100Ml	Albumin Gm/100Ml	Globulin Gm/100Ml	Sodium mEq/L.	Potassium mEq/L.	Chloride mEq/L.	Lymphocytes per Cu.mm
1	11.8	0.33	5.1	3.8	1.3	156	2.6	118	
2	19.5	0.09	4.5	3.3	1.2	149	3.3	115	3,160
3	15.9	0.14	4.6	3.0	1.6	145	4.5	119	6,580
4	15.4	0.07	4.8	3.1	1.7	146	3.4	119	2,920
5	18.6	0.11				151	3.5	121	350
6	13.4	0.08				154	3.4	118	650
7	15.8	0.16				151	3.1	124	1,415
8	30.9	0.05							
9	24.0	0.04	6.2	4.2	2.0	153	3.1	108	
Average	18.4	0.10	5.0	3.5	1.6	151	3.7	117	2,512

Table 1. Physiologic data from control animals.

Dog	Weight Kg.	Lymph Flow Ml/Kg/Hr.	Total Protein Gm/100Ml	Albumin Gm/100Ml	Globulin Gm/100Ml	Sodium mEq/L.	Potassium mEq/L.	Chloride mEq/L.	Lymphocytes per Cu.mm
1	13.2	0.05	7.8	4.1	3.7	150	3.3	116	
2	13.2	0.12	3.3	1.9	1.4	154	3.5	111	2,660
3	11.3	0.11	5.0	3.9	1.1	154	3.6	117	1,770
4	13.2	0.14	10.6	3.3	7.3	151	3.3	105	
5	11.1	0.05	12.8	6.2	6.6	157	2.8	120	570
6	16.6	0.12	4.8	4.2	0.6	150	3.6	121	4,830
7	15.0	0.14	5.1	4.3	0.8	155	3.8	121	4,180
8	10.0	0.07	8.5	5.5	3.0	140	3.4	130	10,000
9	11.3	0.14							6,650
Average	12.8	0.11	7.2	4.2	3.0	151	3.4	118	4,386

Table 2. Physiologic data from animals with supravalvular mitral stenosis, before acute constriction.

Dog	Lymph Flow Ml/Kg/Hr.	Total Protein Gm/100Ml	Albumin Gm/100Ml	Globulin Gm/100Ml	Sodium mEq/L.	Potassium mEq/L.	Chloride mEq/L.	Lymphocytes per Cu.mm
1	0.08	5.5	3.0	2.5				
2	0.08	2.4	1.3	1.1	142	3.9	113	1,500
3	0.17	4.6	3.4	1.1	151	4.4	119	3,780
4	0.12	9.0	3.7	5.3	150	3.4	111	
5	0.11	8.7	3.9	4.8	141	3.1	123	430
6	0.11	4.2	3.7	0.5	144	4.1	113	2,480
7	0.19	4.3	2.8	1.5	168	4.7		9,720
8	0.18	6.2	3.9	2.3	142	3.2	123	5,000
9	0.20							6,450
Average	0.14	5.6	3.2	2.4	148	3.3	117	3,194

Table 3. Physiologic data from animals with supravalvular mitral stenosis, after acute constriction.

Dog	Lymph Flow Ml/Hr. Before Constr.	Lymph Flow Ml/Hr. After Constr.	Percentage of Change	Mean Pul. Art. Press., mm Hg Before Constr.	Mean Pul. Art. Press., mm Hg After Constr.	Percentage of Change
1	0.7	1.0	+44%	34	35	+3%
2	1.5	1.1	—27%	26	17	—35%
3	1.3	1.9	+46%	20		
4	1.9	1.4	—26%	24	28	+17%
5	0.6	1.2	+100%	20	35	+75%
6	2.0	1.9	—5%	20	11	—45%
7	2.1	2.8	+33%	23	32	+39%
8	0.7	1.8	+157%	20	30	+50%
9	1.6	2.3	+44%	25	33	+48%

Table 4. Comparison of changes in lymph flow and mean pulmonary artery pressure before and after acute constriction of the mitral valve area.

months following ligation of the right lymphatic duct showed 25 ml. of serous fluid in the right pleural space. The other two dogs showed no increase in pleural fluid. Dissection of the right thoracic outlet in the three animals revealed that collateral lymphatic channels had developed.

Microscopic examination of the lungs of dogs sacrificed at the end of one hour of acute constriction of the mitral valve area showed a striking degree of congestion and interstitial edema especially around the small arteries of the lung. A slight to moderate amount of edema fluid was noted in some of the alveolar spaces (figure 1). The lymph nodes along the right side of the trachea showed marked dilatation of the sinuses and accumulation of eosinophilic amorphous material within these sinuses (figure 2). No appreciable difference was observed in the electrolyte concentration in the two groups of animals.

Discussion

Once the technique of cannulating the right thoracic duct was mastered, there was little difficulty in collecting lymph. The marked variations in the terminal portions of the right thoracic duct, however, made an accurate evaluation of the right duct flow less valid. We feel that the selection of the largest efferent channel would equalize out in a series of this size. Recently, Leeds et al[1]

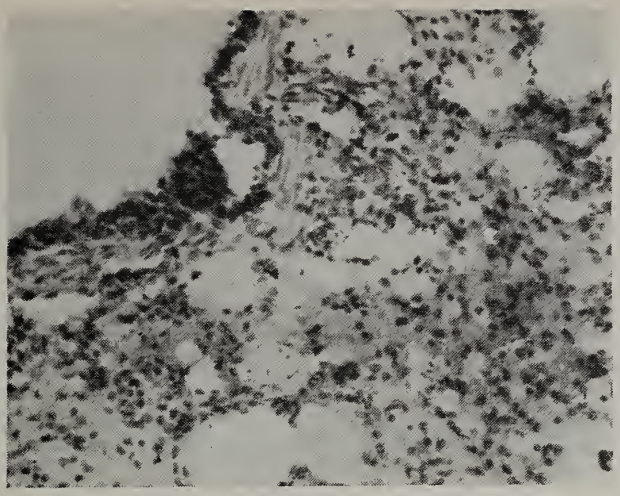


Figure 1. Lung. Marked interstitial and intra-alveolar edema. 200X.

have devised a considerably more accurate method of collecting right duct fluid.

The increase in right lymph flow following supravalvular mitral stenosis was of a lesser magnitude than was anticipated. Rabin and Meyer demonstrated a similar albeit small increment in right thoracic lymph flow following acute elevation of the pulmonary venous pressure.[2] Liebow[5] reported similarly a small increase in milliliter per minute. One of the reasons for the small increase in right lymph flow might be attributed to the time interval following acute constriction of the mitral valve area. Leeds[6] indicated that a time interval of one-half to two and one-half hours was necessary for lymph to accumulate in the lung before an increase in right lymph duct flow occurred.

It was conjectured that ligation of the right thoracic duct might lead to the development of a right hydrothorax. However, the development of collateral channels prevented a true evaluation. It would seem that in the presence of lymph duct obstruction by inflammatory or neoplastic processes that a complete obstruction might occur and lead to the development of a right sided pleural effusion. The finding of an effusion of 25 ml. in one animal would suggest such a mechanism.

The changes in chemical composition of the lymph are difficult to interpret. The rise in total protein in supravalvular stenosis can probably be attributed to the passive congestion of the lungs. Previous studies[2] have shown local pulmonary edema in supravalvular mitral stenosis. The fall in protein following acute constriction may be a manifestation of the time interval of collections. Perhaps a more dilute fluid occurs initially. The histologic changes in the lungs and regional lymph nodes were those of a richly proteinaceous transudate.

Summary

1. The right thoracic duct was cannulated in nine normal dogs and in nine dogs with a supravalvular mitral stenosis. Rate of lymph flow and chemical composition of the lymph was compared in the two series.

2. There was a questionable increase in lymph flow in the experimental animals and a still further increment following an acute constriction of the mitral valve area. The increase generally correlated with the increase in mean pulmonary artery pressure. The increments were small as regards volume but large as regards percentage increase.

3. The failure of a larger increment in flow and a greater change in chemical composition in lymph is probably due to the short interval of collection following acute constriction of the mitral valve area.

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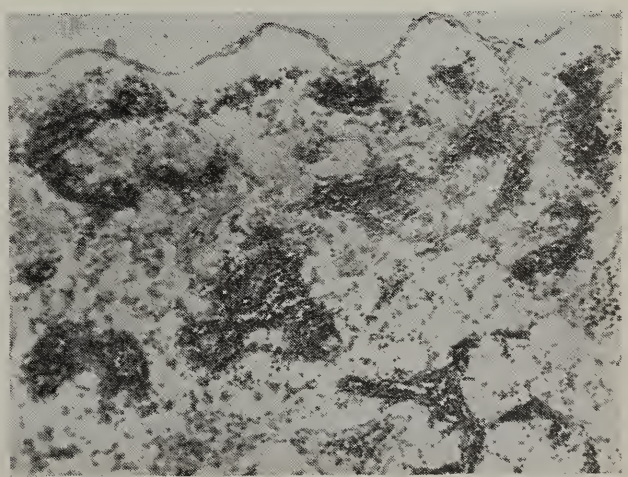


Figure 2. Right Paratrachael Lymph Node. Marked edema of the sinuses. 75X.

Orthostatic Hypotension

JOHN M. KALBFLEISCH, M.D.*

Since the original description by Bradbury and Eggleston[1] in 1925, two types of orthostatic hypotension have been recognized. A marked fall in blood pressure on assuming an upright posture may accompany tabes dorsalis, diabetes mellitus, adrenal insufficiency, or it may follow sympathectomy or the administration of a variety of drugs. More puzzling, however, is the idiopathic type of orthostatic hypotension where there is no clear association with any disease mechanism.

The idiopathic type is usually seen in males over 40 years. By definition they must have a fall in blood pressure on standing of at least 35 mm. Hg systolic and 20 mm. Hg diastolic. The pulse remains slow and regular. The patient may complain of dizziness, may faint or occasionally have a convulsion. Laboratory studies are notoriously normal except the occasional observation of a lowered metabolic rate or the inversion of T-waves of electrocardiograms performed during hypotensive episodes which become upright when the patient is at rest.

In idiopathic orthostatic hypotension, it is assumed that there is an interruption in the sympathetic nervous system which results in a failure of reflex arteriolar constriction in response to the normal venous pooling of changes in posture. This neural defect may be either central (in the hypothalmus or preganglionic fibers) or peripheral (postganglionic).[2] If the lesion is central, the administration of norepinephrine causes a moderate elevation of blood pressure. If the lesion is peripheral, however, norepinephrine causes a marked hypertensive response as if the effector cells of the arterioles were hypertensive to this drug. In both groups, the release of norepinephrine by sympathetic nerve endings in response to tilting is less than that observed in normal subjects. The effectiveness of other vasopressor agents is governed not only by the type of lesion present, but by their chemical structure as well. One group similar to norepinephrine acts directly on the cell while others such as ephedrine act indirectly on the end-organ to preserve naturally formed norepinephrine.

There are two other clear evidences of autonomic insufficiency. Tachycardia does not accompany hypotensive episodes, and hypohidrosis is not due to primary sweat gland deficiency since normal sweating can be invoked by giving pilocarpine. It is disappointing that these clear changes in autonomic function are not accompanied by any predictable findings at autopsy. Only non-specific degenerative changes have been noted.

Hemodynamic studies during tilting have shown a variable decrease in cardiac output, renal and cerebral blood flow, and venoconstriction.

The treatment of idiopathic postural hypotension has had limited success. Vasopressor agents have been disappointing. Corticotropin, antihistamines, procaine and a host of other drugs have all been unsuccessful. More recently, desoxycorticosterone acetate (DOCA), 9 alpha-fluorohydrocortisone and pitressin have been successful in some cases.[3] Counterpressure garments (G-suits) sometimes alleviate symptoms, but are expensive and are not readily available. Abdominal binders and elastic leg stockings or bandages are helpful in some instances. Patients should be cautioned to avoid sudden changes in posture and prolonged motionless standing which predispose to syncope.

(Continued on Page 405)

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Message from the Dean

Those present at the dedication of the new Research Building on the Medical Center campus experienced a keen sense of pride, and justifiably so, for the completion of this building is a stride in the University of Oklahoma's determined progress toward joining ranks with the best medical schools in the country in teaching and research. The building, completed at a cost of $864,193 in funds from a Research Facility construction grant and an appropriation from the 1959 state legislature, is for the exclusive use of faculty investigators. This spacious, well-equipped and beautiful facility makes possible better accommodations for research efforts. Projects that were being carried on in makeshift laboratories in areas that were never designed for research will, in all probability, be brought to successful completion in quarters properly and completely equipped.

Basic science and clinical departments alike have benefited from the additional space. Thirty-seven laboratory modules of the latest and most appropriate design with an average size of 12 by 20 feet have been assigned to investigators from the Departments of Physiology, Pharmacology, Microbiology, Biochemistry, Pathology, Medicine, Surgery, Pediatrics, Psychiatry and Dermatology. Space has also been set aside for departmental programs now in the process of development. Departments heretofore unable to conduct research because of primitive space, or no space at all, are now encouraged to join in productive research.

The Research Building represents a distinct accomplishment for the University of Oklahoma in that the School of Medicine will now be able to operate a research facility with the objectives of valuable research and training by an active and able faculty. In addition to research, the building will be used for the advanced training of graduate students and postdoctoral fellows. Other facilities include radioisotope laboratories, animal quarters, photography studio and dark room, constant temperature room and sterile rooms.

In Senator Mike Monroney's dedicatory address he likened the building to a partnership operation between state and federal agencies and said of research, "There is no investment so capable of eternal dividends. The interest is compounded through the remainder of time." In 1960, $715 million were spent in medical research in this country and in answer to the challenging question, "Is research worth the cost?", Senator Monroney reminded that disease in the same year cost $35 billion. He further pointed out that the greeting card industry grossed $5 billion and "get-well" cards were a major portion of this amount.

It is now readily apparent and can very well be expected that great and significant gains in investigative work will be forthcoming from the modules of the Research Building of the University of Oklahoma Medical Center.

Mark R Everett

Acute Dermatomyositis and Systemic Scleroderma*

JOHN TALBOTT, M.D.**

Introduction

LEST THERE BE any question in your mind regarding the existence of each and every one of the unusual maladies under consideration, I am confident that no one would disagree with the identification of any one of them in the well-developed or the terminal stage. In the initial months after onset of symptoms, however, clinical and laboratory findings may not be particularly helpful and skepticism regarding a specific diagnosis may be justified.

Although the etiology of the unusual collagen disorders as well as rheumatoid arthritis and acute rheumatic fever, the more usual connective tissue maladies, is not known, hypersensitivity or an auto-immune mechanism are believed to be vital factors. Hypersensitivity as an etiologic agent has relatively satisfactory proof in the experimental laboratory in polyarteritis and to a lesser degree in systemic lupus. This appears to be a better explanation etiologically than any other yet advanced. Although polyarteritis has been produced in animals and a LE-like syndrome in humans following hydralazine, it has not been possible to reproduce either acute dermatomyositis or systemic scleroderma in animals. It may be that before long an auto-immune mechanism may be implicated in these maladies as it has been postulated for chronic rheumatoid arthritis.

The relationship of the less common disorders to rheumatoid arthritis and acute rheumatic fever is pertinent. In the initial weeks, months or even years of the clinical course of the less common maladies, a presumptive diagnosis of acute rheumatic fever or acute rheumatoid arthritis may be justified on the basis of the clinical findings and laboratory studies. The features that characterize either of these maladies, however, may disappear as the disease progresses. Eventually the patient presents the clinical and laboratory findings of acute dermatomyositis or scleroderma. We do not know from the evidence available at this stage

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of clinical investigation whether the disease originally was rheumatic fever or rheumatoid arthritis and subsequently evolved into one of the less familiar maladies. An equal acceptable explanation is that the less familiar malady presented the most familiar joint symptoms incidentally and that one disease only was present.

Acute dermatomyositis and systemic scleroderma are believed to have more in common than any other two of the unusual disorders of connective tissue. Even so, clinical differentiation is possible in most instances. Characteristics of acute dermatomyositis include cutaneous lesions, muscle weakness and sometimes muscle tenderness. In scleroderma, on the other hand, the skin may be atrophic and pigmented and muscle atrophy is more apparent than muscle weakness.

Clinical Manifestations

Neither of these maladies are clinical oddities at the present time, several instances of each disease may be seen on the medical service of a general hospital in the course of a year. Females tend to be more susceptible in our experience although some series reveal that the male is somewhat more susceptible to dermatomyositis than the female. The incidence in children of acute dermatomyositis is higher than any of the other collagen disorders of the unusual variety.

In dermatomyositis, edema of the face, sometimes a skin rash and weakness of the central muscles of the body may be observed. The thigh muscles and the shoulder girdles especially are affected, while in scleroderma the peripheral groups, notably the hands, forearm and feet are affected.

Diffuse calcinosis may appear as a late manifestation in a small percentage of patients with dermatomyositis whose clinical history extends over a period of several years. Calcinosis may also be observed in a significant percentage of patients with systemic scleroderma whose clinical course persists for one or more decades.

Low grade fever, malaise, and arthralgia may be noted in either malady. Symptoms usually are more acute in dermatomyositis than in scleroderma. Extensive cutaneous manifestations in dermatomyositis portend severe muscle involvement as determined by symptoms and clinical examination. Erythema may be present with or without subcutaneous edema. The term heliotrope has been applied to the appearance of the face of the affected. The face and V of the neck are the common sites of erythema. Because of involvement of the shoulder girdle the patient may be unable to wash her face or comb her hair, a not infrequent complaint in patients with well-developed rheumatoid arthritis. The consistency of involved muscles may appear normal, doughy or firm and fibrous. The patient may walk with an unsteady gait or shuffle because of weakness and fibrosis of the skeletal muscles.

Gastro-intestinal symptoms, dyspepsia, anorexia and nausea may appear in either dermatomyositis or scleroderma. Sometimes involvement of the gastro-intestinal system is observed fairly early in the course of the disease, in others it may be a late manifestation. Involvement of the lower portion of the esophagus may permit regurgitation of acid contents from the stomach which leads to esophagitis and ulceration. In our series we have not observed peptic ulceration of the esophagus in dermatomyositis. Roentgenographic evidence of gastro-intestinal involvement may be demonstrated in the esophagus, small bowel and the large bowel. The time of transit of the barium from the pharynx to the stomach may be prolonged and in the prone position complete emptying of the esophagus may be delayed for as long as 30 minutes, similar to advanced achylia. It is unusual to find the entire length of the esophagus, stomach and duodenum filled with barium except in those maladies. The changes in the small bowel suggest a paralytic ileus or a deficiency disease. Barium may remain in the small intestines for 48 hours after ingestion. There may be dilatation and atony of loops of small bowel with spasm and poor mucosal markings in other areas. Involvement of the colon may be suspected from a history of alternating constipation and diarrhea. Roentgenographic changes are suggestive of ulcerative colitis without involvement of the sigmoid, either as determined by roentgenographic examination or by sigmoidoscopy. Dilatation of the hepatic flexure with marked narrowing of the descending colon is seen.

Pulmonary symptoms have a higher incidence in scleroderma than dermatomyositis but may be observed in each disease. A chronic non-productive cough followed by dyspnea and later severe orthopnea may be noted. The functional changes have been divided into the ventilatory and the respiratory disturbance. The function may be related to the inability to move air in and out of the lungs effectively. The skin and muscles of the thoracic cage restrict normal motion. There may be diffuse peribronchial fibrosis with obstructive emphysema. Thickening of the alveoli walls, narrowing of the lumen and changes in the blood vessel walls may progress to obliteration and impair the exchange of gas across the alveoli membrane. We have observed one patient with dermatomyositis in whom it has been necessary to perform a tracheotomy on three occasions over a period of three years.

The coexistence of neoplastic disease and dermatomyositis merits comment. The incidence is considerably higher than chance. In the series of cases seen at the University of Michigan Hospital in Ann Arbor, 18% of the patients suffering dermatomyositis revealed malignant tumors at some time in the course of the malady. A review of the literature discloses the following lesions: carcinoma of the ovary, breast, stomach, lung, esophagus, colon, rectum, kidney, sarcoma of the bone and reticulo-endothelial system, Hodgkin's disease, multiple myeloma and a chromophobe adenoma of the hypophysis. Improvement of the clinical features of dermatomyositis following radical or suppressive treatment of the tumor is of great practical significance. A permanent remission of the connective tissue disorder following treatment of the tumor is an unusual experience. In our series we have observed no such examples.

The chronicity of dermatomyositis has been responsible for the development of morphine addiction in two patients. We have not observed any patients with scleroderma to become addicted. It may be of some significance to note that in each of the two instances in which this has occurred in dermatomyositis the patients have been doctors' wives.

The hands in scleroderma are more susceptible than the feet. Palmar sweating may be increased or decreased. Usually there is intolerance to the cold. Three stages of sclerodermatous transformation of the skin of the face, neck and hands may be distinguished. Initially there may be diffuse non-pitting edema with flattening of the normal folds and a yellowish-white appearance to the skin. This is replaced by fibrosis in the second stage. The skin hardens and clings to the spase subcutaneous tissues. The dorsa of the hands and feet are prone to develop these manifestations. The face begins to show the features that are characteristic as if it were a mask. Purpura, unrelated to steroids, may appear with areas of pigmentation or depigmentation. Atrophy predominates in the third stage. The skin over the face and hands becomes firmly adherent to the underlying bone structure and creates a skull-like appearance. The skin folds are obliterated with marked restriction of motion of the lower jaw. Mucous membranes of the mouth and pharynx become atrophic. One patient who needed dentures could be fitted for them only if the upper and lower dentures were fitted as halves. This required considerable ingenuity by the dentist. Osler refers to this stage as "one of the most terrible of all human ills, prepared to wither slowly and to be beaten down and marred and wasted until one is literally a mummy, encased in an ever shrinking, slowly, contracting skin of steel, a fate not pictured in any tragedy ancient or modern." The fingers are immobilized in flexion unless measures are taken to prevent deformity. Normal use of the digits is impossible. They become extremely atrophic with palpable calcium deposits in the tips of the fingers. This localized phenomenon is associated with absorption of bone and the development of ulcers. A characteristic feature of the ulcer is a tendency to keep open and impede healing. Areas of gangrene appear and it may be necessary to amputate.

It is believed that any distinction between localized and generalized calcinosis in patients with scleroderma is surely an artificial one, since they represent different stages only of the same morbid process. Calcium deposits tend to appear in areas subjected to pressure such as the terminal phalanges,

along the extensor surfaces of the forearm, palmar surfaces of the feet, along the shins, over the patella and in the buttocks. Calcinosis may be observed also on the face and over the trunk. Overlying changes are sometimes minimal.

The clinical course varies somewhat between the two maladies. There are a few instances of scleroderma progressing rapidly as a syndrome simulating malignant nephrosclerosis or malignant hypertension with symptoms of scleroderma present for only a few months. We saw three such cases in a period of only a few months two years ago. One of these patients suffered from what was considered to be typical rheumatoid arthritis for more than two years before the diagnosis of scleroderma was suspected. A positive skin and muscle biopsy confirmed the suspicion. The patient died six months later of a cerebral accident. Extensive renal changes are seen. Fibrinoid degeneration of the walls of the arcuate arteries of the kidney are characteristic features microscopically.

Laboratory Findings

Routine laboratory studies are not particularly helpful in differential diagnosis. A mild anemia, an increase in the sedimentation rate and urinary abnormalities have been recorded. There may be an increase in serum globulin concentration and an eosinophilia. In spite of extensive calcinosis in some patients the concentration of serum calcium, phosphorus and phosphatase in the acute stages as well as the chronic stages may be normal. Serologic tests for syphilis are negative.

Treatment

The treatment in each malady is the same. Systemic symptoms including fever, malaise and anorexia may be benefited by ACTH or the adrenal steroids. I believe that every patient on whom a diagnosis of either of the maladies is made should receive one of these preparations. In our clinic it is customary to start with ACTH, usually a long-acting preparation, and give from 40 to 80 units a day for several days or a week. A change is then made to one of the cortisone preparations. In the past two years prednisone has been preferred, although we have two instances in which hydrocortisone appears to be better tolerated and associated with a better clinical result. During the past six months, a majority of our patients with dermatomyositis and scleroderma have been placed on Decadron (Dexamethasone). This preparation in our experience appears to be approximately ten-fold as potent in its anti-inflammatory effect as prednisone — although in the treatment of rheumatoid arthritis it may not be more than five-fold more active. The antipyretic, euphoric, and appetite-stimulating actions of the adrenal products undoubtedly are responsible for most of the gain. Objective evidence concerning inhibition of the diffuse pathologic process is not convincing. Regression to the pre-treatment status usually follows cessation of therapy. The philosophy of administering adrenal hormones in these collagen disorders varies considerably in the clinics throughout this country. I am one who believes that each patient should receive a fairly long clinical trial. The contraindications are coexistent diabetes, pulmonary tuberculosis or a peptic ulcer. I have no conclusive evidence that steroid therapy in the patients with severe renal pathology and scleroderma was necessarily harmful nor was there any evidence that the renal lesion was benefited.

Our experience with Potaba is limited but others have described excellent results. Our experience with the anti-malarials, particularly Atabrine and Chloraquin have been disappointing.

Surgical attack upon the subcutaneous calcium deposits is not to be recommended generally. Cervical sympathectomy may be of value in selected early cases of scleroderma of the hands. The tendency to the development of contractures should be combatted with physiotherapy, traction, casts, splints and corrective operative procedures. Correct positioning in the early stages of the malady may be helpful in order to prevent deformity as may a balanced program of rest and activity. Until the cause of these maladies is elucidated, we probably will not have definitive therapy to offer.

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Some Clinical Aspects of Systematic Lupus Erythematosus*

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THE DIAGNOSIS of systemic lupus erythematosus has been made with considerably increased frequency since the discovery of the LE Phenomenon by Hargraves.[1] The large number of cases now available for study have added a great deal to our knowledge of this disease. Many extensive reviews of the clinical features of systemic LE are available; it is the purpose of this presentation to select a few of the clinical features of systemic LE for detailed discussion. Certain aspects have been selected because of their helpfulness in suggesting the diagnosis, their prognostic implications, or their values as guides to the management of the disease.

Variability of Presenting Manifestations

The site primarily affected by the pathologic process in systemic lupus seems to be the ground substance of the connective tissue, particularly the walls of small blood vessels. It is not surprising, therefore, that the clinical manifestations of the disease are widespread and diverse, with few of the possible areas of involvement giving rise to clinical manifestations in each case. In addition to variations in sites of clinical involvement, considerable variability in severity of involvement occurs. These phenomena give rise to extreme heterogeneity in the clinical patterns seen in this disease.

The diversity and polysystemic involvement of systemic LE is well illustrated by the clinical manifestations apparent at the time the diagnosis was first made in the thirty-eight patients in our series.

Joint symptoms were the most frequent presenting manifestations, being present in 60% of the cases. These symptoms were limited to arthralgia in most of the patients, often combined with myalgia, but objective joint findings were noted in about one-quarter of these cases. In the latter group clinical features of the arthritis initially suggested the diagnosis of rheumatic fever in about two-thirds of the patients; the joint findings were suggestive of rheumatoid arthritis in one-third.

Clinical evidence of disease in the respiratory tract constituted the second most frequent area affected at the time of diagnosis. Bronchopenumonia or pleuritis often with effusion, were the usual clinical manifestations seen. Cardiac involvement, consisting of a pericardial friction rub, evidence of an effusion, or congestive heart failure, was next in frequency.

Almost half the patients presented with at least one serous membrane involved; a polyserositis was evident in 10% of the cases.

Fever and malaise were present to some extent in most of these patients, but were a dominant feature of the initial clinical syndrome in about one-fourth of them.

Skin lesions were also noted in about one-fourth of the patients at the time of diagnosis. The features of these lesions are discussed subsequently.

Renal disease was evident at the time the diagnosis was made in about one-quarter of

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the cases. The clinical picture of acute nephritis with microscopic hematuria and mild albuminuria was most frequent; marked edema with varying degrees of the nephrotic syndrome were also seen. Occasionally hypertension secondary to the renal disease was observed at this stage of the disease.

Nervous system involvement was present initially in slightly over 10% of the cases, most frequently manifest as a psychosis; conclusive seizures of a Jacksonian type were observed in one case.

Hematologic alterations were present as initial manifestations of systemic LE in a few cases; thrombocytopenia and acute hemolytic anemia were noted. The hematologic alterations seen in systemic LE are discussed at greater length in the paper by Doctor Bird.

From this list of the sites of clinical manifestations of the disease present in various combinations at the time the diagnosis of systemic LE was made, it can be seen that the differential diagnoses included rheumatic fever, rheumatoid arthritis, tuberculosis, fever of unknown origin, various renal diseases, as well as other causes of pneumonia, hemolytic anemia, psychosis or convulsions. Exact figures for the incidence of the individual manifestations do not seem to be very useful since there is so much discrepancy among observations reported by different authors. The figures given seem to vary with the interests of the observer; on hematologic services most cases seem to present with hematologic manifestations; on dermatologic services most cases are likely to present with a rash. We are rheumatologists, which probably explains why the most common presenting symptoms in our series were in the joints. Another reason for variations in the reported incidence of individual manifestations is the increased facility with which the diagnosis of systemic LE can be made in recent years. For example, before the LE phenomenon was discovered almost all reported cases of lupus erythematosus had skin lesions, since the clinical diagnosis could not be made in the absence of a rash; the incidence of skin lesions has become progressively lower as each new series of cases has been reported since 1948. These phenomena serve to further underscore the clinical variability of this disease. Careful analysis of the relative frequency of the individual clinical manifestations of systemic lupus does not seem to be of great value, but emphasis on the variability of the clinical picture and the differential diagnostic problems is important.

Although many of our concepts of systemic LE have changed with increasing experience with the disease, the relative sex incidence has remained constant. Systemic LE remains a disease predominantly affecting females; the approximately 9:1 ratio of females to males reported in the early literature has been noted by subsequent observers and has been found in our cases. The absolute incidence of systemic LE in males has increased with the rise in the total incidence of the disease, however, and despite the greater incidence in females, LE occurs with sufficient frequency in men to require that the diagnosis be considered whenever warranted by the clinical picture.

Vasculitis

Inflammatory changes of small vessels in systemic LE can be clinically evident in certain areas, particularly in the skin. Erythematous or cyanotic macules or patches of telangiectasis may appear transiently, most frequently on the volar pads of the digits or around the nailbeds. They may occur on other parts of the hands or feet or in the butterfly area of the face; occasionally they are quite widespread. These lesions usually blanch on pressure, but may become purpuric.[1] The vasculitis may cause occlusion of small vessels, resulting in patches of gangrenous ischemic necrosis a few millimeters in size. The latter lesions are tender and usually leave a small depressed scar after healing.

Clinically evident vasculitis was noted during exacerbations of the disease in about one-quarter of the cases in our series. When present they were of considerable diagnostic value; lesions of this type are not pathognomonic of systemic LE since identical phenomena can occur in periarteritis nodosa, but they do indicate that systemic LE is a strong diagnostic possibility.

Mucosal Ulcerations

Shallow, sharply circumscribed, punched out ulceration of mucous membranes are most frequently seen on the palate and buccal mucosa and occasionally on the vaginal mucosa. These lesions are also due to the superficial vasculitis in systemic LE. These lesions often become infected with monilia; not infrequently, the first indication of the presence of the ulcerations is the observation of patches of monilial infection. Lesions of this type were noted during exacerbations of the disease in about one-quarter of our cases, and were occasionally of diagnostic value.

Alopecia

Diffuse loss of hair can be another sign of active systemic LE. Occasionally the hair loss is very marked and cosmetically disturbing; in other instances it may be patchy and barely noticeable.

Clinical Value of These Lesions

We found that clinically apparent vasculitis in the skin, mucosal ulcerations and alopecia were diagnostically helpful signs in occasional obscure cases. More frequently they were useful as guides to the effectiveness of therapy in known cases of systemic LE, since these lesions usually respond to suppressive doses of steroid hormones. Diagnostic problems commonly arise in which it is necessary to differentiate between an exacerbation of the LE and an intercurrent process, such as an infection or toxicity of steroid therapy. The finding of one or more lesions indicative of lack of control of the systemic LE helped to clarify such problems; the presence of mucosal ulcerations, digital vasculitis or, least often, alopecia, pointed to lack of control of the LE in a problem case when other clinical manifestations could have been due to an intercurrent process. They provided clinical indication of the completeness of therapeutic suppression of the underlying disease and gave a basis for deciding whether fever, pleurisy, pulmonary consolidation or psychosis was due to incompletely suppressed LE, complicating infection or steroid toxicity. It must be added that not infrequently the problem was a combination of active LE and infection, requiring treatment with increased dosage of steroids and appropriate antibiotics.

Infections are common occurrences in patients with systemic LE; 40% of our patients had at least one complicating infection. These infections usually occurred during exacerbations of the systemic LE, and it seemed that uncontrolled activity of the LE increased susceptibility. In addition, it was noted that an increase in the dose of steroids was needed in addition to antibiotics to control the infection; antibiotics or steroids alone were not found to be adequate.

The most common infection encountered was pneumonia. Staphylococcal septicemia was also frequent; it was observed at autopsy in four of the nine deaths which occurred. Since septicemia is becoming more and more common as a cause of death in patients with systemic LE, the importance of delineating whether a given clinical syndrome is due to an exacerbation of the LE, secondary infection, or a combination of the two cannot be overemphasized.

The total white blood cell count was found to be a valuable indication of the presence of infection in those patients. Leucopenia is one of the most consistent findings in systemic LE; it was present at least intermittently in 80% of our patients. The finding of a leucocytosis usually indicated an infection or other complication. Interestingly, a white count of 9,000 or 10,000 could be a significant leucocytosis in a patient with systemic LE; it was necessary to consider whether a given level of the white count was to be expected under the circumstances, rather than whether it was within the usual range of normal.

Renal involvement is the most ominous manifestation of systemic LE. There is as yet no convincing evidence that any of the available therapeutic measures influence the course of the renal involvement in this disease. The ominous nature of the renal disease is illustrated by the course of our cases. Of the 22 patients in whom albuminuria was present at the time of initial workup, it was severe in seven; of these, four died in less than ten months and one died after 3½ years. The albuminuria was minimal in fifteen patients, of whom thirteen are alive

two to six years later. The nephrotic syndrome was a particularly ominous clinical feature of the renal disease in our patients; it was observed in five patients all of whom died in less than 10 months. This experience resembles that reported by Muehrcke et al.[2]

The prognosis in the patients with renal involvement was determined by the rate of progression of the impairment of renal function. The duration of the disease from the time of initial diagnosis varied from three weeks to 39 months in the four patients who died with severe azotemia. Other patients were found to have significantly impaired renal function when first seen, with BUN levels of 30 to 50 mgm%; the degree of impairment of renal function has not progressed further in some of these patients during periods of observation up to four years.

Psychotic episodes are another manifestation of systemic LE which frequently gives rise to clinical problems. One-quarter of our patients had one or more periods of psychosis which were most frequently of an organic type, consisting of varying degrees of confusion, disorientation and memory defect. These psychotic episodes usually improved on steroid therapy, although doses as high as 80 to 100 mgm of prednisone per day were often required. As has frequently been observed,[3] psychotic episodes can result from steroid therapy; in these instances, however, the psychosis usually resembled a paranoid schizophrenia. These patients often improved if the dosage of steroids was decreased, or became worse if the dosage was increased. It is important to note that psychosis due to uncontrolled LE was observed more frequently than that due to steroid toxicity even when patients were already receiving high doses. Evidence of other uncontrolled manifestations of the LE, such as fever, rash, arthralgias, digital vasculitis, mucosal ulcers, alopecia, leucopenia, etc, indicated lack of control of the LE in these patients and pointed to the need to raise the dose of steroids in the presence of psychosis.

Relationship to Discoid Lupus

The relationship of systemic lupus erythematosus to several other syndromes has been the subject of considerable controversy. One problem has been the relationship of discoid lupus type of rash to systemic lupus erythematosus. The suggestion that these were manifestations of the same disease process, originally made in the dermatologic literature, has been doubted by several authorities, most notably Baehr.[4] Most authors, however, believe that the two are basically related.[5] The high incidence of occurrence of a discoid type of rash in our patients with systemic LE (45%) would support the contention that these are related processes. The relationship of the time of appearance of the discoid rash to the time of appearance of other features of disease was variable. The discoid rash preceded other clinical manifestations of the disease in eight of the seventeen cases by one to twenty-one years (average 8.3 years). In five cases, the discoid type of rash appeared following the development of systemic involvement, the interval varying from six months to four years (average 1.4 years). Perhaps of greatest importance, the discoid rash appeared at the same time as manifestations of the systemic disease in four cases. In some patients an acute erythematous type of rash could be observed to develop areas of atrophy and changes in pigmentation, evolving into a typical discoid lesion. The variability of the temporal relationship of the onset of the discoid rash to the onset of the systemic lesions resembles the relationship seen for other manifestations of LE, such as the arthritis, abnormal serum proteins, and false positive serologic test for syphilis. This variability in time of onset, the frequency of the coexistence of systemic manifestations and discoid lesions, and the evolution of acute lesions into discoid lesions strongly support the belief that they are part of same disease.

Relationship to Rheumatoid Arthritis

Occasional patients with clinical systemic LE have joint changes suggestive of rheumatoid arthritis including synovial thickening, cartilage and bone destruction, deformities and even histologically typical subcutaneous nodules. The rheumatoid agglutinin phenomenon is quite commonly found in patients with systemic lupus.[6] Thirty per cent of the patients with systemic LE in our series who were tested were found to have positive agglutination tests using the latex

particle procedure. In addition, some patients with rheumatoid arthritis show the LE phenomenon.[7,8] The systemic manifestations which occur in patients with rheumatoid arthritis serve to further confuse the issue; fever, systemic toxicity, splenomegaly, leucopenia, anemia, pleurisy and pericarditis can be found singly or in combinations in otherwise convincing cases of rheumatoid arthritis, but these patients are free of rash or renal involvement, both clinically and on biopsy, and many do not show the LE phenomenon.

What is the relationship of these two clinical syndromes? They may be basically the same disease, varying in the area of predominant involvement; the arthritis may precede the rest of syndrome in some cases in the same manner as the discoid rash, serological test for syphilis or other abnormal serum proteins. On the other hand, systemic lupus and rheumatoid arthritis may be basically different diseases involving the same organ system, the connective tissue, which has limited ways of responding to disease. In such a situation, similarities in clinical and laboratory findings would be expected.

The true relationship of rheumatoid arthritis and systemic lupus remains unresolved; prominent investigators can be found to support either viewpoint. There are some advantages to considering them separate diseases for the present. This attitude is clinically useful, since the prognosis is different in patients with rheumatoid arthritis with systemic manifestations than it is in patients with systemic LE with joint involvement. The philosophy of therapy also differs, in view of the difference in the threat to life. If we may reason by analogy, many other clinically similar disease states have proved to have different etiologies; for example, at present there are six well-defined causes of clinically similar hemorrhagic diatheses with prolonged clotting times due to impaired thromboplastic activity, all of which used to be called either hemophilia or "pseudohemophilia." Similarly, in cases which used to be clincally indistinguishable from sickle cell anemia or sickle trait there can now be demonstrated, because of technical advances, other inherited abnormalities of hemoglobin formation (hemoglobin C, thalassemia, etc.) in addition to the sickle trait. In genetics many analagous situations are known in which a single abnormal phenotype can be produced by several gentically and biochemically distinct abnormalities. Final definition of the relationship of systemic LE to rheumatoid arthritis will probably require knowledge of the etiology or basic pathogenetic mechanisms.

Relationship to Other "Collagen Diseases"

The same statements which have been made concerning the relationship of systemic lupus erythematosus to rheumatoid arthritis may be made about the relationship of systemic LE to other members of the family of "collagen disease." All of the diseases in this group cause widespread involvement of the connective tissue, and although they usually give rise to identifying and characteristic manifestations, individual patients may show features typical of other diseases in the group during part of their course. This may lead to difficult differential diagnostic problems, and often the diagnosis "a collagen disease" is suggested. Because of the similarities and overlap in clinical manifestations, many investigators feel that these diseases are all pathogenetically related in a fundamental fashion. The fact remains, however, that it is not unusual to find overlapping clinical and pathologic alterations when several diseases involve the same structure, even when they are produced by diverse etiologies and pathogenetic mechanisms. Despite this, a clinical diagnosis as to which disease is present is possible in most cases. The growing tendency to "lump" the collagen diseases together may confuse future investigation into basic mechanisms; in addition, the differences in prognosis, therapeutic problems and likely complications make is clinically more useful to consider these diseases as separate entities.

Conclusion

Medical students used to be told "know syphilis and you will know internal medicine." Systemic lupus erythematosus and the "collagen diseases" are becoming more frequent than syphilis, at least among hospitalized patients, and the differential diagnostic and therapeutic problems they present are even more varied than those which

occur in syphilis. Perhaps medical students should now be told, "know systemic lupus erythematosus and you will know internal medicine."

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FACULTY NEWS

Regents Make New Appointments

Three members of the School of Medicine faculty were promoted to the rank of full professor and 25 elevated to associate professor by recent action of the University Regents.

They are among 71 who moved up to a higher faculty position effective July 1.

Robert M. Bird, M.D., was named professor of medicine; Merlin K. DuVal, M.D., professor of surgery; and Charles F. Obermann, M.D., clinical professor of psychiatry, neurology and behavioral sciences. All were associate professors.

Assistant professors boosted to associate professorships were:

Hubert M. Anderson, M.D., Rene Menguy, M.D., and G. Rainey Williams, M.D., surgery; Paul C. Benton, M.D., Neil B. Kimerer, M.D., and Dale W. Peters, M.D., psychiatry; Richard E. Carpenter, M.D., James J. Gable Jr., M.D., C. G. Gunn, M.D., Robert C. Lawson, M.D., Newman S. Matthews, M.D., William O. Smith, M.D., and Kelly M. West, M.D., medicine;

Glen G. Cayler, M.D., Doman K. Keele, M.D., and Henry N. Kirkman, M.D., pediatrics; Edward H. Kalmon Jr., M.D., David D. Lowry, M.D., and Hooshang Taybi, M.D., radiology; Dick M. Lowry, M.D., otorhinolaryngology; John R. Sokatch, Ph.D., microbiology.

Given the rank of associate clinical professor were: Charles M. Bielstein, M.D., Harold W. Buchner, M.D., Louis S. Frank, M.D., and Charles W. Freeman, M.D., pediatrics.

Preceptors Named by Medical School

J. William Finch, M.D., Hobart, has been appointed a preceptor by the University of Oklahoma School of Medicine. New appointments for 1961-62 also include the following associate preceptors: William Bernell, M.D., M. Wilson Mahone, M.D., Ralph S. Phelan, M.D., Richard F. Shriner, M.D., and Van H. Howard, M.D., all of Hobart; J. B. Tolbert, M.D., Mountain View; L. O. Short, M.D., Granite; Marshall M. Ingram, M.D., Anadarko, and W. L. Honska, M.D., Stillwater.

OU Graduate College Awards Degrees

The University of Oklahoma Graduate College awarded degrees to four students in the Medical Center division this spring.

Charles L. Cahill, El Reno biochemist, and Dean Allen Harris, former member of the staff of the OU Speech and Hearing Clinic, received Ph.D. degrees. Jerry C. Capps and Max Wayne Hurst, both graduates of Drury College, Springfield, Missouri, earned Master of Science degrees in biochemistry.

News

OSMA to Emphasize "5-Point Program"

Although present association activities will be maintained and in some cases accelerated next fall, the coming organizational year will see the OSMA place emphasis on President Clinton Gallaher's "5-Point Program." Previously announced during Gallaher's Inaugural Address, the program was reviewed at a June 4th meeting of the Executive Committee, and definite plans were laid for its implementation.

Highlights of the program are:

Point I. Medical Career Counseling. The association, through its Medical School Liaison Committee, will launch a major effort to provide a personalized counseling and recruitment service to the highschool students of the state who plan or are interested in medical careers. It is generally planned that physician-teams will be organized within each Councilor District of the State and will be made available to the principals of the more than 400 high schools of Oklahoma. Enrollment at the University of Oklahoma will be encouraged.

As a related effort, the committee will assist school of medicine officials in their counseling program for pre-medical students at the state's universities and colleges.

Point II. Financial Aid to OU Medical Students. Extensive plans are underway to implement the House of Delegates-approved Scholarship, Grant and Loan Program. The Executive Committee has recommended that a Scholarship, Grant and Loan Committee be formed: To administer the monies to be raised through the $5 annual dues increase (effective January, 1962); and to supervise the disbursement of these funds in cooperation with medical school officials. This committee will be comprised of the OSMA President, President-Elect, and the three immediate past-presidents who are residing in the state.

EXECUTIVE COMMITTEE MEETS

Comprehensive rules and regulations for the handling of the funds will be developed by the committee, in cooperation with legal and banking authorities.

Point III. Medical Law Familiarization Program. All candidates for medical licensure will receive indoctrination in the Medical Practice Act of Oklahoma. Plans for this program, as approved by the Executive Committee, call for joint sponsorship by the OSMA and the State Board of Medical Examiners, and a committee of physicians from the two groups has been appointed.

Point IV. Professional Responsibility Indoctrination Program. During the coming organizational year, all county and district medical societies will be urged to devote at least one program a year to the indoctrination of new members (and to the re-indoctrination of old ones). Recommended subjects to be covered include church, civic, charitable and public relations responsibilities, as well as the physician's obligation to keep abreast of professional progress, to know and practice the code of ethics and to be well-versed in medico-legal responsibilities. A refresher course in the organization and objectives of the OSMA and the AMA will also be recommended.

To stress the importance of this program and to provide a model for component societies to follow, the 56th Annual Meeting of the OSMA will feature a professional indoctrination panel discussion.

Point V. Professional Education. The physician's responsibility to continue his professional education will receive impetus next fall, when the Council on Professional Education will begin a series of eight decentralized postgraduate courses. Proven successful with three experimental courses last year, the program will now be expanded to cover more subjects and more geographic areas of the state.

Also on tap is an experimental program of

educational television, where most state doctors will be able to receive televised lectures in their own homes.

Other Actions

In other actions, the Executive Committee:

- Approved the creation of an OSMA Speakers Bureau, to provide speakers to civic groups, etc., on such subjects as "The Economics of Health" and "Medical Education."
- Interpreted Resolution No. 9 (55th annual meeting), which reaffirmed the association's opposition to the corporate practice of medicine, as not being in conflict with association sponsorship of SB 399, a bill to permit the incorporation of the business aspects of a medical practice.
- Gave the green light to the Constitution and Bylaws Committee to prepare the amendments necessary to change the organizational structure of the association, as authorized by the Delegates (55th annual meeting).
- Reviewed, with Oklahoma Delegates to the AMA, three resolutions to be transmitted for AMA approval. The resolutions are (1) To Improve General Practice Residencies, (2) To Oppose the Action of the American College of Surgeons Regarding Selection of Surgical Assistants, and (3) To Discontinue the Scientific Portion of the AMA Mid-Winter Meeting (for economy purposes).
- Ruled that Resolution No. 5 (55th annual meeting), in which the OSMA expressed opposition to service contracts, carried no punitive provisions, and was thereby only a policy guide to county medical societies and individual members.
- Agreed that the Chairman of the five association "Councils" should be instructed to take full responsibility for implementing the appropriate features of the "5-Point Program" and other approved association activities.

Summary of 110th AMA Meeting

Osteopathy, medical discipline, communications, surgical assistants, drug legislation, general practice residencies, relations with allied health professions and services, and poliomyelitis vaccine were among the major subjects covered by 115 resolutions and 28 reports acted upon by the House of Delegates at the American Medical Association's 110th Annual Meeting held June 25-30 in New York City.

Doctor George M. Fister of Ogden, Utah, member of the AMA Board of Trustees and previously a member of the House of Delegates, was named President-Elect of the Association. Doctor Fister will become President at the June, 1962, annual meeting in Chicago, succeeding Doctor Leonard W. Larson of Bismarck, North Dakota, who assumed office at the Tuesday night inaugural ceremony in New York.

The AMA 1961 Distinguished Service Award was voted to Doctor Walter H. Judd of Minneapolis, physician and member of Congress, for his contributions as a medical missionary, humanitarian and statesman devoted to world peace.

Total registration through Thursday, with half a day of the meeting still remaining, had reached 56,315, including 22,681 physicians.

Oklahoma was officially represented by: Delegate Wilkie D. Hoover, M.D., Tulsa; Delegate Malcom E. Phelps, M.D., El Reno (who served on a reference committee and was elected President of the Aces and Deuces, a fraternal organization of states which have one or two AMA delegates); Alternate Joe L. Duer, M.D., Woodward; Alternate Tom C. Points, M.D., Oklahoma City; President Clint Gallaher, M.D., Shawnee; President-Elect J. Hoyle Carlock, M.D., Ardmore; and, John F. Burton, M.D., Oklahoma City, member of the AMA Council on Medical Service.

During the meeting, Doctor Burton was named Chairman of the Council on Medical Service, one of the major divisions of AMA activities. He is the first Oklahoma physician to be so honored.

Osteopathy

In considering a report of the Judicial Council and three resolutions on the subject of osteopathy, the House of Delegates agreed with the intent of the report and resolutions, but instead adopted the following statement of AMA policy:

"1. There can never be an ethical relationship between a doctor of medicine and a cultist, that is, one who does not practice a system of healing founded on a scientific basis.

"2. There can never be a majority party and a minority party in any science. There cannot be two distinct sciences of medicine or two different, yet equally valid systems of medical practice.

"3. Recognition should be given to the transition presently occurring in osteopathy, which is evidence of an attempt by a significant number of those practicing osteopathic medicine to give their patients scientific medical care. This transition should be encouraged so that the evolutionary process can be expedited.

"4. It is appropriate for the American Medical Association to *reappraise its application of policy* regarding relationships with doctors of osteopathy, in view of the transition of osteopathy into osteopathic medicine, in view of the fact that the colleges of osteopathy have modeled their curricula after medical schools, in view of the almost complete lack of osteopathic literature and the reliance of osteopaths on and use of medical literature, and in view of the fact that many doctors of osteopathy are no longer practicing osteopathy.

"5. Policy should now be applied individually at state level according to the facts as they exist. Heretofore, this policy has been applied collectively at national level. The test now should be: Does the individual doctor of osteopathy practice osteopathy, or does he in fact practice a method of healing founded on a scientific basis? If he practices osteopathy, he practices a cult system of healing and all voluntary professional associations with him are unethical. If he bases his practice on the same scientific principles as those adhered to by members of the American Medical Association, voluntary professional relationships with him should not be deemed unethical."

Medical Discipline

In a major move designed to strengthen the profession's disciplinary mechanisms, the House approved the conclusions and recommendations of the Medical Disciplinary Committee. One recommendation suggests that "The bylaws of the American Medical Association be changed to confer original jurisdiction on the Association to suspend or revoke the AMA membership of a physician guilty of a violation of the Principles of Medical Ethics or the ethical policy of the American Medical Association regardless of whether action has been taken against him at local level."

Another "encourages and urges that each state association report annually to the American Medical Association all major disciplinary actions taken within its jurisdiction during the preceding calendar year."

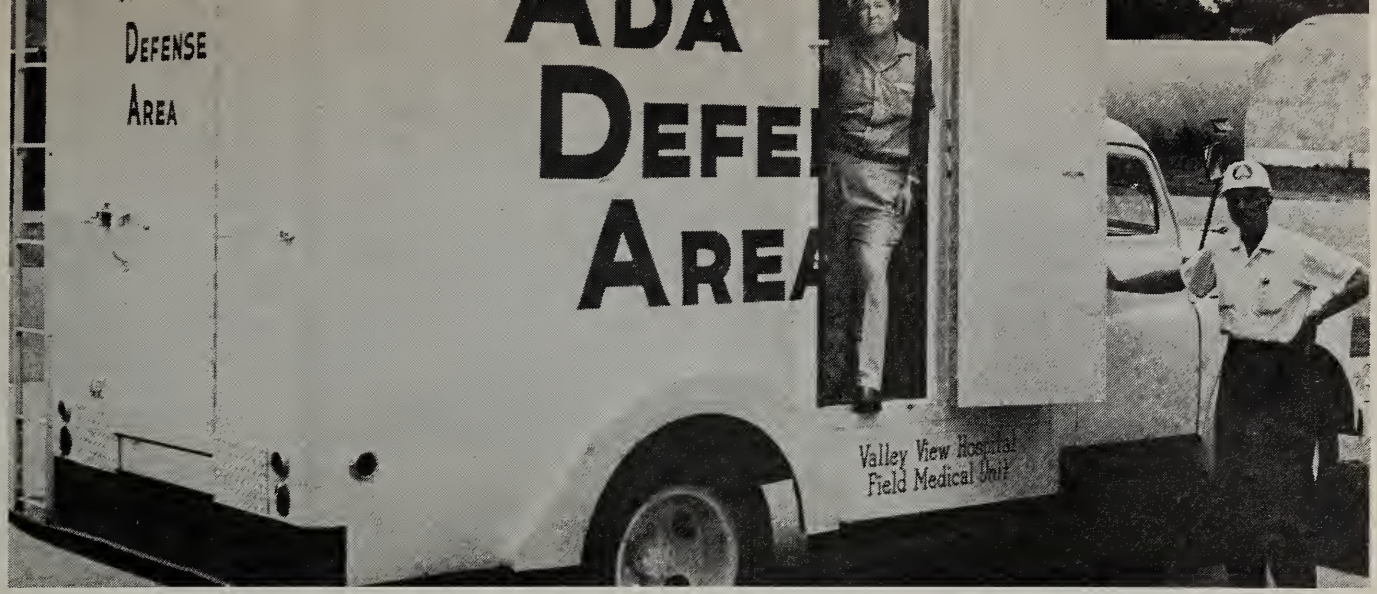
The report urged state and county medical societies to utilize grievance committees as "grand juries" to initiate action against an offender so as to obviate the necessity of making an individual member of a medical society complain against a fellow member.

The House suggested that each medical school develop and present a required course in ethics and socio-economic principles, and that each state board of medical examiners include questions on ethics and proper socio-economic practices in all examinations for license.

Communications

Acting upon four resolutions related to the Association's public relations program, the House adopted a substitute resolution directing the Speaker of the House of Delegates to name seven elected members of the House as a special committee "to study and continually advise the Board of Trustees on the broad planning and coordination of all phases of communications of the American Medical Association, so that the public and the members of the medical profession are properly and adequately advised of the

(Continued on Page 405)



Orange M. Welborn, M.D., Ada physician, is shown standing beside the Valley View Hospital Field Medical Unit. In the doorway of the van is Julian Henry, furniture dealer and Property Officer of the Pontotoc County CD unit.

Ada Steps Forward With Mobile Disaster Unit

Valley View Hospital, with the help of Ada citizens from all walks of life, has put itself on wheels. The "mobile arm" of the hospital, designed to extend hospital services to any disaster site, takes the form of a custom built truck which is especially staffed and equipped to meet major medical emergencies.

The idea for the unique civil defense unit was born in the mind of Mrs. Celeste Kemler, hospital administrator, after consultation with Doctors Orange M. Welborn, James F. Hohl and David Ramsay, local physicians.

Planned as an integral part of the hospital's emergency medical care program, the unit, valued at $8,000, was acquired at nominal cost, due to the contributions of many Ada businesses and professional people. The hospital donated a used truck, a bakery mounted a discarded van on the chassis, and local auto supply, sheet metal and electrical firms contributed the necessary skilled labor and parts to produce the mechanically-sound, glistening white field medical unit.

Doctor Welborn led local medics in planning and supervising the functional aspects of the unit.

Equipment and Operational Plans

In the event of a major medical disaster, whether natural or man-made, the vehicle will rush to the scene and immediately begin processing casualties. Three eight-man crews have been organized, providing the necessary staff of skilled personnel on a round-the-clock basis.

Flashing lights and wailing sirens will proclaim the truck's arrival at a disaster area. Immediately upon arrival, the driver will start an auxiliary generator and a 50 foot signal tower will be erected, to guide rescue workers and ambulances to the unit.

After two-way radio communications are established between the field unit and the hospital, and the special fold-out tarps are sheltering each side and the rear of the truck, Ada's Field Medical Unit will be ready to receive casualties.

Casualties will be brought to one side of the truck, where they will receive emergency treatment, be tagged and then transferred to the sheltered area on the truck's other side, there to await evacuation back to the hospital. Walking wounded will await transportation under the rear shelter.

Inside the van are eight footlockers, containing medical supplies, splints and other equipment. Blankets, thirty-six stretchers, and processing tags are also housed in the body of the truck. A radio bench and storage cabinets are built-in features of the unit.

Ounce of Prevention

Adans express hope that the unit will never need to be used, but their example of disaster preparedness presents a worthwhile challenge to other Oklahoma cities. "We're proud of our achievement," says Doctor Welborn, "and the health personnel of the Ada area have bolstered confidence in their ability to meet major medical emergencies."

Proceedings of the 55th Annual Session of the House of Delegates

of the

Oklahoma State Medical Association

Opening Session*

The 55th Annual Session of the House of Delegates of the Oklahoma State Medical Association was called to order on Sunday, May 7, 1961, at 10:00 a.m. in the Pompeian Court of the Mayo Hotel in Tulsa by Marshall O. Hart, M.D., Tulsa, Speaker of the House of Delegates.

Doctor Hart asked the Credentials Committee if a quorum was present. The Credentials Committee Chairman, C. Riley Strong, M.D., El Reno, announced that a quorum was present.

Invocation was given by Doctor Paul O. Shackelford of Tulsa.

Doctort Hart announced that all voting Delegates should be seated in the front section of the room, where tables were provided, and that all others should find chairs toward the back of the room.

The Speaker announced the appointment of the following working committees of the House of Delegates:

Credentials Committee

C. Riley Strong, M.D., El Reno, Chairman
William Cheatwood, M.D., Duncan
Charles Wilbanks, M.D., Tulsa

Constitution and By-Laws Committee

E. C. Mohler, M.D., Ponca City, Chairman
Wiley G. Chestnut, M.D., Enid

Miscellaneous Business Committee

Malcom E. Phelps, M.D., El Reno, Chairman
Carlton E. Smith, M.D., Henryetta
Ben F. Gorrell, M.D., Tulsa

Legislation and Public Policy Committee

Wilkie D. Hoover, M.D., Tulsa, Chairman
Harlan Thomas, M.D., Tulsa
Roger G. Johnson, M.D., Frederick

Insurance and Medical Service Committee

Joe L. Duer, M.D., Woodward, Chairman
Ella H. Murray, M.D., Edmond
William A. Geiger, M.D., Fairfax

Sergeant at Arms

E. K. Norfleet, M.D., Bristow

Tellers

Alpha Johnson, M.D., El Reno
Paul O. Shackelford, M.D., Tulsa
Thomas C. Points, M.D., Oklahoma City

*Proceedings of the closing session will appear in the August *Journal*.

Parliamentarian

C. M. Hodgson, M.D., Kingfisher

As the next order of business, Doctor Hart began the introduction of guests.

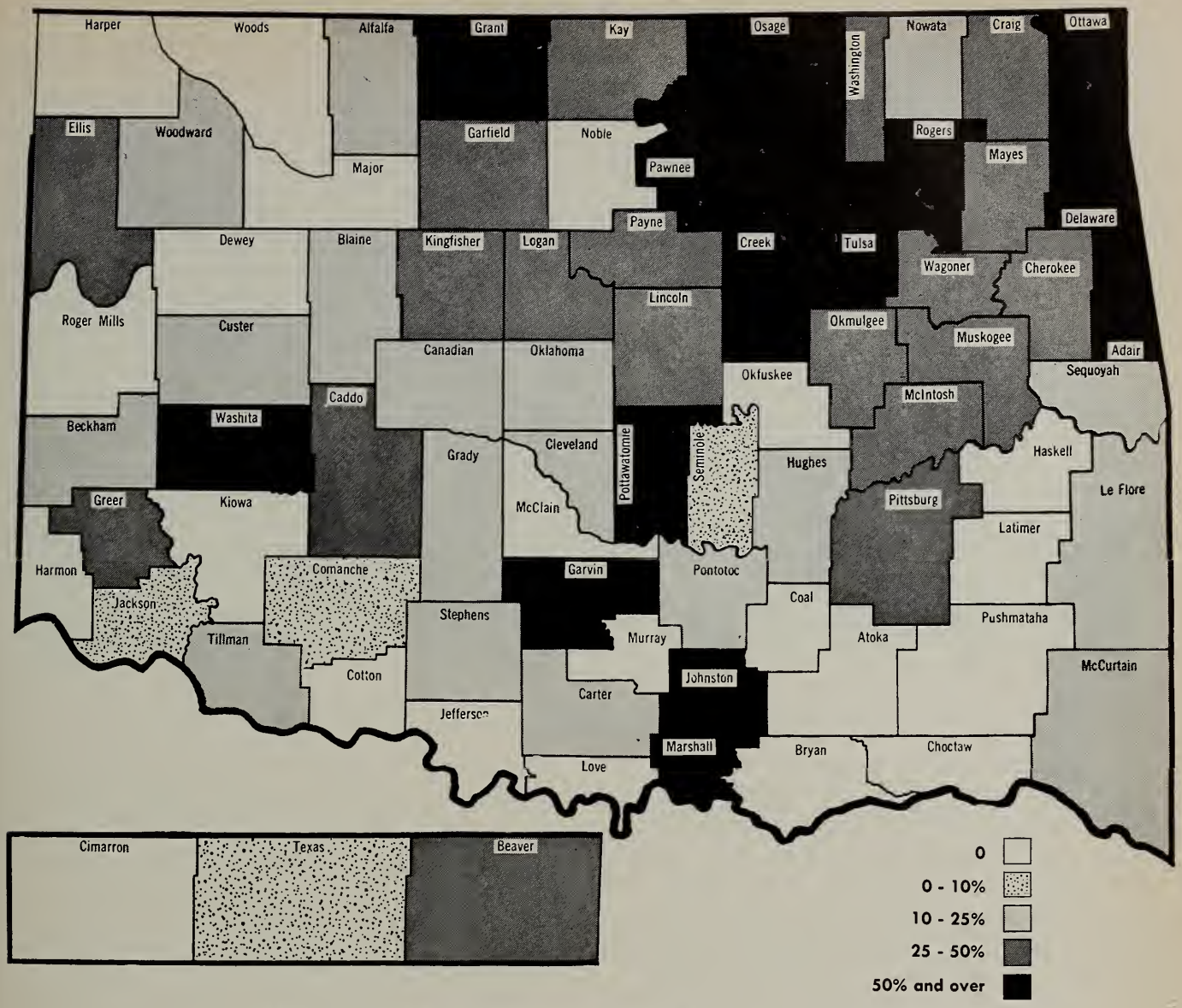
First introduced by Doctor Hart was Representative Ed Bradley of Tulsa who presented a resolution (see page 414) commending the Oklahoma State Medical Association, along with other groups, for its work in connection with the Governor's Committee on Employment of the Handicapped, with particular reference to sponsorship of the annual essay contest.

Doctor Hart next introduced Mrs. Virgil Ray Forester, President of the Woman's Auxiliary to the Oklahoma State Medical Association. Mrs. Forester, in her address to the House of Delegates, expressed the appreciation of the Woman's Auxiliary for the aid it had received from different members of the Association, and particularly to Doctor C. F. Foster for his assistance in the decoration of the Auxiliary's new office in the Association's Headquarters Building in Oklahoma City. Mrs. Forester then introduced Mrs. W. P. Fite, Sr., incoming President of the Woman's Auxiliary.

Doctor Hart next called on the President of the Association, Doctor Walter E. Brown, Tulsa, who introduced Mark R. Everett, Ph.D., Dean of the University of Oklahoma School of Medicine, and presented Doctor Everett with a check in the amount of $7,943.82 as a gift from the American Medical Education Foundation. Doctor Everett expressed thanks for the contribution, on behalf of the Medical School, and commended Doctor Brown for his diligence and ability in his duties as President of the Association.

Next on the list of guests was E. F. Lester, M.D., Secretary of the State Board of Medical Examiners. Doctor Lester outlined for the House of Delegates some of the many problems faced by the Board, and urged all members of the Association to visit the Board's office in order to formulate a better understanding of the functions of the Board and its contributions in promoting the prestige of the profession, not only in Oklahoma but throughout the nation. He also explained to the members many of the duties of the Board of Medical Examiners which are not commonly known but which provide important liaison between his office and various state and federal governmental agencies. Doctor Lester, in explaining the various financial problems of the Board, noted that it would be a good idea to have the law read that the yearly re-registration fee would be up to $10.00 depending on need.

(Continued on Page 412)



55th Annual Meeting Attendance, By County

Each year, annual meeting officials are faced with the ever-increasing challenge of developing and promoting a scientific and social program which will attract sufficient interest among members of the association to produce a worthwhile attendance.

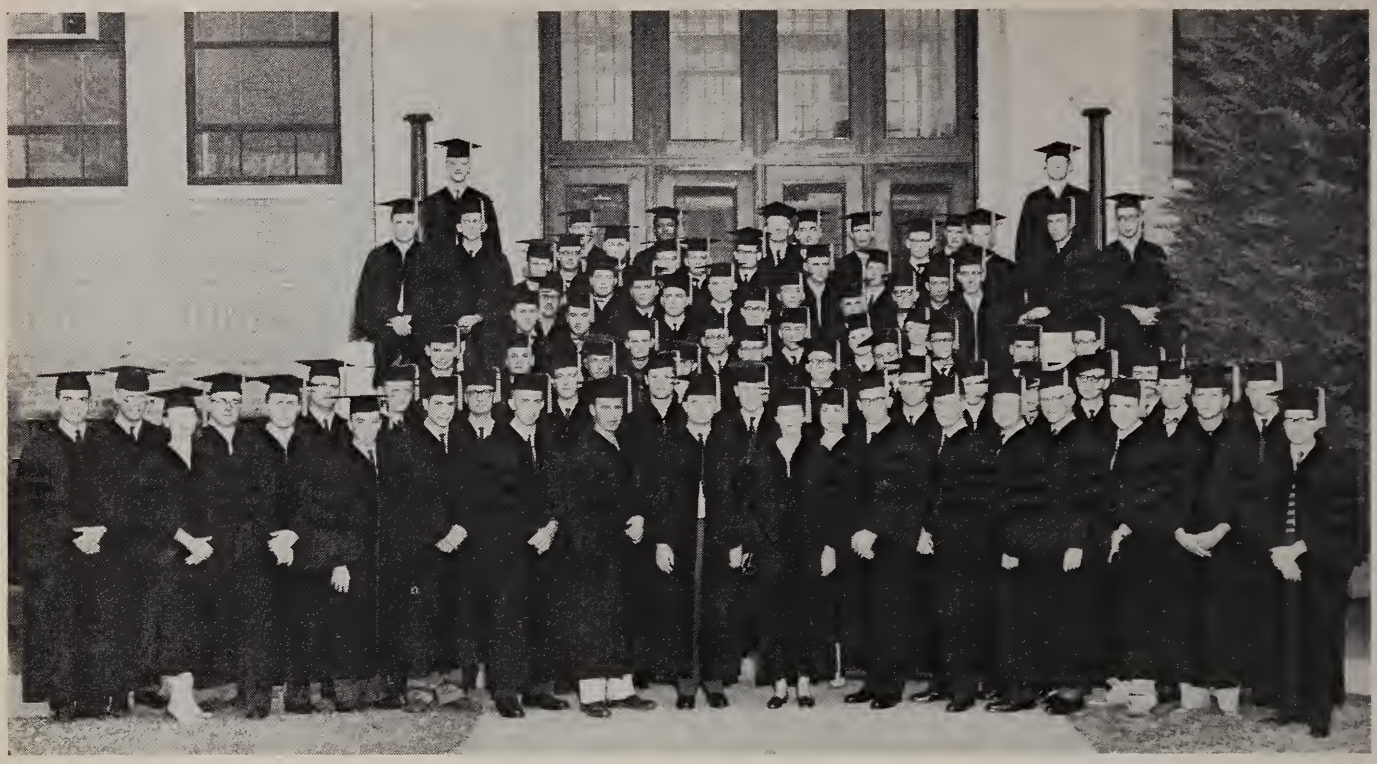
The score sheet for the 55th annual meeting, which drew a registration of 613 physicians, is graphically depicted above on a county basis. The total registration figure represents about *40%* of the *active* membership of the OSMA.

While larger meetings have been held in the past, the meeting may easily be ruled a success in terms of modern-day competition for the doctors' postgraduate training time. General Chairman C. S. Lewis, Jr., M.D., and Program Chairman Donald L. Brawner, M.D., marshalled the planning committees well, and Tulsa physicians (host society) developed many innovations which improved the quality of the meeting and undoubtedly enhanced attendance.

It has been said that the scientific program, and the nineteen visiting lecturers associated with it, would have done credit to any meeting, including those of national significance.

In examining the geographic pattern of attendance distribution, it appears obvious that the meeting site had much to do with the county society turnout, with some notable exceptions.

Planning for the 56th annual meeting is already underway by General Chairman J. R. Stacy, M.D., who recognizes that Oklahoma County, next year's host society, must work long and hard to match the quality of the Tulsa event.



OU Medical School Awards 83 Degrees

Eighty-three men and women were graduated from the University of Oklahoma School of Medicine May 21 in commencement exercises at the Oklahoma City University auditorium.

Degrees were conferred by Mark R. Everett, Ph.D., director and dean, and Horace B. Brown, Ph.D., OU dean of business administration.

Graduating seniors receiving top honors were Dale B. Sherrod, Oklahoma City, and Jane Self, Tulsa. Sherrod, class president, was given the Onis George Hazel Memorial citation to the senior "most nearly approaching the ideal doctor-patient relationship." Miss Self was the first recipient of the L. J. Moorman award, established in memory of the late Oklahoma City physician to recognize the student showing "the greatest scholarly attitude in medicine."

Delmar Ray Caldwell, Shattuck, and Richard Elwood Mansfield, Oklahoma City, received Student Research Achievement awards. Caldwell also won the Oklahoma City Surgical Society citation to the most outstanding senior student in surgery.

Two members of the class of 1962, Ernest R. Daffer, Wilson, and James Vance Miller, Oklahoma City, shared in the new State Dermatological prize for the best paper describing original research in dermatology.

Graduates and their internship appointments are:

From Okmulgee—Robert L. Alexander, St. Louis City Hospital, St. Louis, Missouri.

Bristow — Edward W. Allensworth, St. John's Hospital, Tulsa.

Wewoka—Lanny G. Anderson, University of Oklahoma Hospitals, Oklahoma City.

Shidler—John D. Atkin, Wesley Hospital, Oklahoma City.

Okeene—Gerald L. Beckloff, St. Francis Hospital, Honolulu, Hawaii.

Seminole—Robert F. Bell, University of Oregon Hospitals, Portland.

Cushing—Robert N. Blackburn, St. Lukes Hospital, Spokane, Washington; Ted W. Wolfe, St. Anthony Hospital, Oklahoma City.

Tulsa—John R. Alexander, William F. Carlile, Thomas S. Llewellyn, Jane Self, all at St. John's Hospital, Tulsa; Ronald D. Clark, University of Oklahoma Hospitals; Joe B. Jarman, St. Anthony Hospital, Oklahoma City; Robert R. Moose, Jerry L. Puls

and Milton R. Workman, Hillcrest Medical Center, Tulsa; Charles E. Dean, University of Indiana Hospitals, Indianapolis; Dean T. Fitzgerald, Baptist Memorial Hospital, Memphis, Tennessee; John I. Smith, St. Anthony Hospital, Denver, Colorado.

Lawton—Reagan H. Bradford, Oklahoma City VA Hospital; Melvyn L. Brill, St. John's Hospital, Tulsa; A. Munson Fuller, Cook County Hospital, Chicago.

Prague—Michael N. Burleson, St. Anthony Hospital, Oklahoma City.

Shattuck—Delmar R. Caldwell, University of Texas Medical Branch, Galveston.

Cleveland, Oklahoma—Frank D. Chapman and Jack D. Powell, Hillcrest Medical Center, Tulsa.

Red Oak—Joe R. Danel, St. Anthony Hospital, Oklahoma City.

Drumright—Preston W. DeShan Jr., Wesley Hospital, Oklahoma City.

Heavener—Ollie W. Dehart, St. John's Hospital, Tulsa.

Muskogee—Lamar D. Desmuke, Youngstown Hospital Association, Youngstown, Ohio; John E. McAlister, University of Oklahoma Hospitals, Oklahoma City.

Elk City—David S. Dycus, St. John's Hospital, Tulsa.

Shawnee—Edmund A. Franken Jr., St. John's Hospital, Tulsa; Willard B. Morgan Jr., Wesley Hospital, Oklahoma City.

Enid—Roger A. Franz, Gorgas Hospital, Canal Zone; David M. Selby, University of California Hospitals, San Francisco.

Brownsville, Texas—Adan L. Gorena Jr., St. Anthony Hospital, Oklahoma City.

Wakita—John L. Hackney, Mounds Park Hospital, St. Petersburg, Florida.

Ponca City—Charles H. Hale, U. S. Naval Hospital, Portsmouth, Virginia; James D. Morgan, U. S. Naval Hospital, Camp Pendleton, California.

Jet—Charles B. Haunschild, University of Oklahoma Hospitals, Oklahoma City.

Cherokee—Robert J. Hogue Jr., Wesley Hospital, Oklahoma City.

Norman—George W. Ingels, Methodist Hospital, Dallas, Texas; Lawrence S. Merritt, St. Anthony Hospital, Oklahoma City.

Orienta—Kenneth L. Koehn, Wesley Hospital, Oklahoma City.

Ardmore—Billy P. Loughridge, University of Texas Medical Branch, Galveston.

Manhattan, Kansas—Richard E. Mansfield, U. S. Public Health Service, New Orleans, Louisiana.

Sapulpa—Griffith C. Miller, Mercy Hospital, Oklahoma City.

Keota—James D. Moore, St. Anthony Hospital, Oklahoma City.

Idabel—Bernie Parsons, St. Lukes Hospital, Spokane, Washington.

Anadarko—Kenneth G. Plummer, Mound Park Hospital, St. Petersburg, Florida.

Jones—Terrill E. Price Jr., St. Francis Hospital, Honolulu, Hawaii.

Jennings—David G. Riegel, King County Hospital, Seattle, Washington.

Harmon—Robert M. Richard, Los Angeles County Hospital, Los Angeles.

Tahlequah—Victor L. Robards Jr., St. John's Hospital, Tulsa.

Chester—Monty L. Rothenberger, Army Medical Service Hospitals, Fort Knox, Kentucky.

Burbank, Oklahoma—Charles J. Shaw, St. John's Hospital, Tulsa.

Claremore—June C. May, University of Oklahoma Hospitals, Oklahoma City.

Bartlesville—J. Rigby Slight, University of California Hospitals, Los Angeles.

Frederick — Henry P. Smith, Hillcrest Medical Center, Tulsa.

Mangum—Lowell N. Templer, St. Anthony Hospital, Oklahoma City.

Gotebo—Harold D. Thiessen, Wesley Hospital, Oklahoma City.

Pawnee—William E. Van Buren, U. S. Naval Hospital, Oakland, California.

Cordell—Phillip J. Wright, University of West Virginia Hospitals, Morgantown, West Virginia.

Oklahoma City—Walter L. Bowlan, William A. Crockett, Clyde H. Dorr, Robert P. Shaver, Robert M. Smith and Stanton L. Witter, St. Anthony Hospital, Oklahoma City; Charles L. Jobe Jr., University of Oklahoma Hospitals, Oklahoma City; Gloria D. Rogers and Kenneth A. Rogers Jr., Wesley Hospital, Oklahoma City; Charles H. Farr, Mercy Hospital, Oklahoma City; Harrison F. Hayes and Dale B. Sherrod, Presbyterian Hospital, Denver; William R. East, USAF Hospital, Lackland, San Antonio, Texas;

Paul B. Edmonds, Martin Army Hospital, Fort Benning, Georgia; Mildred A. Franklin, San Francisco Hospital, San Francisco, California; Harvey L. Gaspar, Methodist Hospital, Dallas, Texas; Crockett H. Page, St. Joseph Mercy Hospital, Detroit, Michigan; Luther J. Strickland, Arkansas Baptist Hospital, Little Rock.

Class of '50 Holds Eleventh Reunion

Western Hills Lodge at Sequoyah State Park was the site of the Eleventh Reunion of the 1950 class of the University of Oklahoma School of Medicine on June 9 and 10.

The two-day event included a scientific program, business meeting, swimming, dancing and special entertainment.

Guest speakers for the program were: Ernest Lachman, M.D., Robert W. King, M.D., William Renfrow, M.D., and Rafael Rigual, M.D., all of Oklahoma City; Max Schideler, M.D., Enid; and Robert Bowers, M.D., Congo, Africa, who is taking a residency at the University of Oklahoma Medical Center.

Have You Heard?

EDWARD T. FRANK, M.D., a native of Ponca City and graduate of the University of Tennessee School of Medicine, has joined the staff of the Oxley-Morgan Clinic in Guymon.

After five years of practice in Oklahoma City, GERALD BEASLEY, M.D., is now associated with Doctors Richard Ellis, Casper Smith and Dwight Weedn in Duncan.

Members of the medical profession were invited to attend the Southern Oklahoma Legal Institute on June 9th at Lake Murray Lodge. Speaking before the lawyers' group was WILLIAM N. HARSHA, M.D., Oklahoma City.

Newly elected officers of the Oklahoma State Radiological Society are E. D. Greenberger, M.D., McAlester, President; G. Ray Ridings, M.D., Oklahoma City. Vice-President; Simon Pollack, M.D., Tulsa, Secretary; and, Carl G. Coin, M.D., Oklahoma City, Treasurer.

During the recent meeting of the American Academy of General Practice held in Miami Beach, M. B. GLISMANN, M.D., Oklahoma City, was one of four delegates who was presented a "Certificate of Appreciation" for having served in that capacity for ten years or longer. At the same meeting, MALCOM E. PHELPS, M.D., El Reno, was re-elected President of the American Academy of General Practice Foundation Board of Trustees.

MARSHALL INGRAM, M.D., a graduate of the University of Oklahoma School of Medicine, is establishing his practice in Hinton. Doctor Ingram is moving to Hinton from Anadarko where he had practiced for one year after completion of a residency at Charity Hospital in New Orleans.

Summary of 110th AMA Meeting

(Continued from Page 398)

policies and concern of the medical profession with respect to all phases and aspects of medical care for all people."

Surgical Assistants

In considering a Board report and two resolutions (one from Oklahoma) on the subject of surgical assistants (with particular reference to the American College of Surgeons edict against using the referring doctor as an assistant), the House approved a set of principles which provided that . . . each AMA member is expected to observe the Principles of Ethics; that doctors should be paid for services personally rendered, but that referral alone does not constitute compensable service; that it is ethical for a surgeon to employ an assistant for a surgical procedure; and, that each physician involved in a case should bill separately (other than a regular, employed assistant).

The use of an employed assistant, whether he is the referring physician or on a per-case or full-time basis, must not be used as a subterfuge to split fees or divide insurance benefits, the report said.

Other Actions

Other major actions included:

- Opposition to allowing the Food and Drug Administration to determine efficacy as well as safety of new drugs.

- Approval of the creation of new two-year residency training programs in general practice (sponsored by Oklahoma and others). Such programs will provide for more experience in obstetrics and surgery.

- Creation of a Commission to Coordinate the Relationships of Medicine with Allied Health Professions and Services.

- Adoption of a report calling for the transition of emphasis from Salk vaccine to oral poliomyelitis vaccine.

- Final approval of a $20/year dues increase; $10 on January 1, 1962, and $10 additional on January 1, 1963.

Books Received

Handbook of Medical Treatment. Milton J. Chatton, M.D., Sheldon Margen, M.D., and Henry Brainerd, M.D., Lang Medical Publications, Los Altos, Calif. Price $3.50.

Handbook of Pediatrics. Edited by Henry K. Silver, C. Henry Kempe and Henry B. Bruyn, Lange Medical Publications, Los Altos, Calif.

Handbook of Surgery. Edited by John L. Wilson and Joseph J. McDonald, Lange Medical Publications, Los Altos, Calif.

The House of Healing. Mary Risley, Doubleday & Co., New York City. Price $4.50.

The Human Frame. Giovanna Lawford, Doubleday & Co., New York City.

Human Pituitary Hormones. Editors for Ciba Foundation, Little, Brown & Co., Boston, Mass.

Infectious Diseases of Children, 2nd Edition. Saul Krugman, M.D. and Robert Ward, M.D., C. V. Mosby Co., St. Louis, Mo. Price $13.00.

Information, Please! Alfred Dreyfuss II, Vantage Press, Inc. New York City. Price $7.50.

Management of Fractures, Dislocations and Sprains. Key and Conwell's, C. V. Mosby Co., St. Louis, Mo. Price $27.00.

Heart Page

(Continued from Page 384)

REFERENCES

1. Bradbury, S., and Eggleston, C.: Postural hypotension: a report of three cases. Am. Heart J. 1: 73-86, 1925.
2. Barnett, A. J., and Wagner, G. R.: Severe orthostatic hypotension: case report and description of response to sympatheticomimetic drugs. Am. Heart J. 56: 412-424, 1958.
3. Hickler, R. B., Thompson, G. R., Fox, L. M., and Hamlin J. T., III: Successful treatment of orthostatic hypotension with 9-alpha-fluorohydrocortisone. New England J. Med., 261: 788-791, 1959.

NOTICE:

Application for Research Fellowships, Research Investigatorships, Established Investigatorships, and Grants-in-Aid are now being accepted. The deadline for applications for Research Fellowships is September 15, 1961, and for Grants-in-Aid, November 1, 1961. For further information and application forms contact: Assistant Medical Director for Research, American Heart Association, 44 East 23rd Street, New York 10, New York.

Auxiliary News

Interim

By this time Oklahoma's report of last year's projects has been made to the National Convention by our out-going President, Mrs. Virgil Ray Forester. Through constancy and consistency, our accomplishments are many. Mrs. Pat Fite, Sr., our new President, will have many suggestions for us when she returns.

Instead of quoting Chaucer, we should think of "Summer is an interim." Regardless of how relaxed or how busy our summer may be, we can always find time to think of ways to keep our members interested; to invite and encourage new members; and to find our place in providing service to our community, based on individual need.

Mrs. Margulis aptly states in the latest *Bulletin*: " . . . But even when each auxiliary member totted up the hours she had spent in community service a few years ago and they turned out to number in the millions, this figure was not a measure of our effectiveness. For no instrument has been devised to measure our real accomplishment, intangible and nearly indefinable: public relations for the medical profession."

First of all, it is important that each president or membership chairman try to imagine being in Auxiliary work for the very first time—not as the veteran member she usually is. Often we overlook explanations of the mechanics of our organization. If only one new member is involved—or several who have seldom attended—be sure to have an adequate orientation to cover the purpose, the projects, and the potential of Auxiliary work.

We assume so much: that the wife of a doctor will, of course, serve as an officer or as a program or health chairman of P.T.A., church groups, and civic organizations; and that, as Medical Auxiliary members, we are always expected to work on health drives. These things veteran members have done and are always doing. But, just in case some of our newer members have been influenced by the glamorous interviews in some of the earlier issues of *The Doctor's Wife*—or the interview with the New York doctor's wife carried in newspapers: "These days *all* doctors have regular hours, so that our social life is never curtailed," we need to make an early approach on our adjustments and responsibilities in our daily lives.

Few areas prove more fruitful than our schools. We can never overlook the health possibilities: many have worked already on audiometer testing, improving nutritional programs in lunchrooms, presenting movies on cancer detection—the list is endless. The physical fitness program on wihch Bud Wilkinson is currently assigned will also provide each Auxiliary with new opportunity to help in every school in our state.

One of the projects in which we have understandable pride is our Health Careers program. It has shown spirited growth since its inception. While we are doing our interim evaluation this month, let us not slight in any way continued emphasis in working with our high school students. But many members have younger children and will be working in elementary grades and junior high schools. How can they encourage younger students? One Auxiliary last year sponsored an essay contest in connection with Doctor's Day, giving awards to outstanding essays. Speech contests are excellent. Science fairs are a wonderful idea at any age level, and most teachers and principals are extremely cooperative. A junior high school (again inspired by a Medical Auxiliary) had a science exhibit and an open house for doctors. Through active participation, one boy said he had become so interested that he had decided he would like to study medicine.

We hope your "interim" is a pleasant one, and that, regardless of your activities, you are occasionally thinking of new ideas to stimulate interest in your local Auxiliary and of new ways to aid your community through personal effort and Auxiliary participation.

PHYSICIAN PLACEMENT

Anesthesiology

Richard S. Dillman, M.D., 529 Fifth Street, Ann Arbor, Michigan; age 35; married; University of Michigan, 1956; board eligible.

George Edward Kimmel, M.D., P. O. Box 186, U.S. Naval Hospital, Camp Lejeune, North Carolina: age 32; married: University of Indiana, 1954; board eligible; available September 15, 1961.

General Practice

Conrad Markert, M.D., Hillcrest Medical Center, Tulsa; age 31; married; University of Oklahoma, 1960; available July 1, 1961.

George Rosenthal, M.D., John Peter Smith Hospital, Fort Worth 4, Texas; married; University of Arkansas Medical School, 1960; available immediately.

Leonard W. Rozin, M.D., 2740 N.W. 21st St., Oklahoma City; age 33; married; University of Kansas, 1959; now completing general practice residency at University Hospital; desires association in Oklahoma City; available July 1, 1961.

John Richard Smith, M.D., U.S.A.F. Hospital, APO 633, New York City, New York; age 29; married; University of Oklahoma School of Medicine, 1957: available September, 1961.

Irving Teague Staley, M.D., 4207 Givens Avenue, Memphis 17, Tennessee; age 32; married: University of Tennessee, 1960; available July 1, 1961.

Joe Allen Stewart, M.D., Box 337, Fountain Inn, South Carolina; age 36; married; University of Oklahoma, 1949; available immediately.

E.E.N.T.

August L. Stemmer, M.D., 20th Station Hospital, APO 696, New York, N.Y.; age 32; married; Harvard Medical School, 1953; board certified; Available May 1, 1961.

Industrial

A. G. Dandenault, M.D., 735 Lundvall, Rockford, Illinois; age 60; single; University of Manitoba Medical College, 1926: prefers general practice with some surgery; available immediately.

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available immediately.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

James Stanford Haimsohn, M.D., 3340 Poplar Avenue, Memphis, Tennessee; age 43; married; University of Tennessee, 1942; board certified: available 90 days.

Donald Sinton Hall, M.D., 8283 Marlow, Detroit 28. Michigan; age 33; married; University of Cincinnati, 1955; available August, 1961.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

Locum Tenens

University of Oklahoma graduate desires locum tenum during the months of August or September, 1961. Contact R. A. Yeakley, M.D., c/o St. John's Hospital, 1923 South Utica Avenue, Tulsa, Oklahoma.

Obstetrics and Gynecology

Philip Tabor Bennett, M.D., Quarters 739A, Maxwell A.F.B., Montgomery, Alabama; age 31; married; University of Texas Medical School, 1954; board eligible; available July 1961.

Robert Russell Fahringer, M.D., 1506 13th Street, Bedford, Indiana: age 38; married: Jefferson Medical College, 1953: board eligible; available immediately.

Richard W. Fenaughty, M.D., 95 Hart Street, New Britain, Connecticut; age 31; married; State University of New York, 1957; available July 1961.

Joseph W. Herbert, M.D., 915 North 1st Street, Temple, Texas; age 41; married: Southwestern Medical School, Dallas, 1945; board certified; available immediately.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

John J. Zadworny, M.D., 419 South Waccamaw Street, Columbia, South Carolina; age 30; married: University of Manitoba, 1955; board eligible; available immediately.

Orthopedics

Sheldon Roger, M.D., 1185 Holly Street, Denver, Colorado; age 31; married; Indiana University, 1953; board eligible; available July 1, 1961.

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Perry Merrill White, Jr., M.D., 3338 Tanglewood Drive, Augusta, Georgia; age 35; married; Baylor University College of Medicine, 1953; board eligible; available August, 1961.

Psychiatry

William L. Sherman, Jr., M.D., 201 East Kirby, Detroit 2, Michigan; age 38; single; Wayne State University College of Medicine, 1947; board eligible; available immediately.

Mary Eichhorn, M.D., 501 Fourth Street, Garden City, Kansas; age 38; single; University of Kansas, 1945; board certified; available immediately.

Murphy Mayo Sims, M.D., 3932 Ruskin Street, Houston, Texas; age 55; Louisiana State, 1936; board eligible; available immediately.

Preventive Medicine

Robert E. Jewett, M.D., 2820 Fairway Drive, Birmingham, Alabama; age 52; widower; Indiana University, 1934; board certified; desires administrative practice; available immediately.

Radiology

Quentin T. Brooks, M.D., 6922 Edgemoor Drive, Houston, Texas; age 40; married; Oklahoma University School of Medicine, 1953; board certified; available immediately.

Fred T. Hargrove, M.D., 217 North Pinewood Drive, Carthage, Texas; age 56; married; University of Oklahoma School of Medicine, 1934; board certified; available January 1, 1961.

Edward M. Sipple, M.D., 5935 Chinquapin Parkway, Baltimore 12, Maryland; age 40; married; University of Maryland, 1951; board eligible; available July 1, 1961.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty. broncho-esophagology and thoracic surgery; available immediately.

David B. Dolese, M.D., 833 South Washington Ave., Holland, Michigan; age 43; married; University of Michigan, 1943; board certified; available immediately.

Charles Richard Fielder, M.D., 158 Bay State Road, Boston, Massachusetts; age 35; single; University of Arkansas, 1954; board certified; available August, 1961.

Urology

Joseph N. Ward, M.D., 480 Emory Circle, Atlanta 7, Georgia; age 35; married; University College, Dublin, Ireland, 1949; board eligible; available immediately.

25 YEARS AGO



Articles published in *The Journal* of the Oklahoma State Medical Association, July, 1936.

The Diagnosis and Treatment of Malignant Diseases of the Mouth

PAUL B. CHAMPLIN, M.D.

Enid

Successful treatment of malignant diseases of the mouth requires a comprehensive knowledge of tumor pathology, of radiation, and of surgery. The operator must always take into consideration the type of tumor with which he is dealing, the limitations of radiation and the limitations of surgery. There is considerable argument at the present time as to how some of these lesions should be treated. The final decision can only rest with the operator, the type of equipment at hand and the experience that he has had with the use of the different procedures. It would be unwise to attempt to treat all malignant lesions of the mouth with radiation and it is also impossible to attain the best results in all lesions by surgery.

In the treatment of malignant conditions of the mouth by radiation I feel that the same principle is involved as in the treatment of malignant diseases by surgery and that is the treatment must be radical enough when first given that a complete cure may be expected as a recurrence of disease following radiation as with surgery greatly jeopardizes the chances for a cure. When treatment is instituted it should be diligently applied so that a complete cure is obtained from the first series of treatment. The idea of administering a small amount of radiation and repeating it at infrequent intervals is entirely erroneous and good results can not be expected.

Great advancement has been made in treatment of cancer of the mouth in the last decade. Fifteen years ago it was considered an incurable disease. At the present time as I have referred to before, we are getting a twenty-five to thirty-six per cent five-year cure of malignancies in this location. Much depends on an early recognition and early treatment. When it becomes general knowledge among doctors and laymen that cancer of the mouth is a curable disease, I am sure that we will see these cases much earlier and our statistics of absolute cures will materially rise.

MISCELLANEOUS ADVERTISEMENTS

PEDIATRIC RESIDENCY VACANCY at first year. Fully approved program in new two million dollar Children's Hospital in teaching medical center with University affiliation. State law requires U.S. citizenship and Oklahoma license (application could be made anytime). Stipend of $200 with full maintenance. Address inquiries to Leon Horowitz, M.D., care of Office of Graduate Education, Hillcrest Medical Center, Tulsa 20, Oklahoma.

WANTED: Internist to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

GENERAL PRACTICE, age 29; three years experience; military service completed; Oklahoma University School of Medicine graduate; married and have children; AAGP. Desires to locate with a small group or with another man, in town of 5,000 or larger. Available immediately; would also consider solo practice. Contact Key C, c/o Oklahoma State Medical Association.

WANTED: Physician to join Clinic and Hospital Staff at Clinton-Sherman Air Force Base. Contact Col. S. A. O'Brian, 857th Medical Group, Clinton-Sherman AFB, Oklahoma. Phone Clinton, Oklahoma FA 3-2010, Ext. 326.

HOUSE PHYSICIANS NEEDED immediately for Tulsa's new St. Francis Hospital. Contact Key B, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma, for further information.

PATHOLOGY RESIDENCIES AVAILABLE, fully approved 4 years (PA-CP). 700 bed hospital. 250 autopsies, 8,000 surgicals, 250,000 clinical laboratory tests. Staff of three full-time board certified pathologists. Full time bacteriologist. Full time Director of Medical Education. Radioisotope laboratory. Electron microscope available. Full maintenance (room and board) plus stipend from $200 monthly on. Apply Leo Lowbeer, M.D., Hillcrest Medical Center, Tulsa 20, Oklahoma.

WANTED: Surgeon to join old established group in town of 10,000 population in West Texas. Need not be Board certified but with adequate residency training. Write Key A, THE JOURNAL, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

FOR SALE: Instruments and office equipment. Contact C. O. Epley, M.D., 1200 North Walker, Oklahoma City, Oklahoma.

PROFESSIONAL BUILDING for sale or lease two blocks from new Midwest City Hospital. Also, would build to suit tenant. Space for four M.D.'s. Contact Key D, The Jornal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City.

FOR SALE: Good used equipment. C. P. Taylor, M.D., 1201 East 5th, Ada, Oklahoma. FE 2-4424.

OPPORTUNITY for general practitioner in Maud, Oklahoma, population of 1,400 and 6,000 in area. Located 15 miles from Seminole Hospital and 18 miles from new Pottawatomie County Hospital with good roads to each. Town was previously staffed by two physicians. Offices and utilities are free. Contact R. M. Snelson, Phone 443 or 208, P.O. Box 1277, Maud, Oklahoma.

Coming Meetings

STATE

Oct. 23-25—Oklahoma City Clinical. Sheraton-Biltmore Hotel, Oklahoma City.

Sept. 10—Oklahoma Chapter, A.A.G.P., Red River Section (includes North Texas). Lake Murray Lodge, Ardmore, Oklahoma.

REGIONAL

July 12-13—Rocky Mountain Cancer Conference, Denver, Colorado.

Aug. 10-12—Rocky Mountain Radiological Society. Denver Hilton Hotel, Denver, Colo.

Aug. 21-25—Clinical and Research Advances in Pediatrics and Child Guidance. The Stanley Hotel, Estes Park, Colorado.

Oct. 1-4—Colorado State Medical Society. Shirley Savoy Hotel, Denver, Colorado.

Nov. 25-27—American College of Chest Physicians, Interim Session. Brown-Palace Hotel. Denver, Colo.

Nov. 6-9—Southern Medical Association. Adolphus Hotel. Dallas, Texas.

NATIONAL

June 12-14—American Neurological Association. Hotel Claridge, Atlantic City.

June 22-23—American Rheumatism Association. Hotel Roosevelt, New York City.

June 22-26—American College of Chest Physicians. Hotel Commodore, New York City.

June 24-25—American Diabetes Association, Inc., Commodore Hotel, New York City.

June 25-30—American Medical Association Annual Meeting, New York City.

Aug. 27-Sept. 1—American Congress of Physical Medicine and Rehabilitation. Sheraton-Cleveland Hotel, Cleveland, Ohio.

Sept. 30-Oct. 8—American Society of Clinical Pathologists. Olympic Hotel, Seattle, Wash.

Oct. 2-5—American Academy of Pediatrics. Palmer House, Chicago, Ill.

Oct. 2-6—American College of Surgeons. Conrad Hilton Hotel, Chicago, Ill.

Oct. 23-24—American Cancer Society. Biltmore Hotel, New York City.

November 4-5—County Medical Society Conference on Disaster Medical Care, Palmer House, Chicago, Illinois.

Nov. 27-30—American Medical Association, Clinical Meeting. Denver, Colo.

55th Annual Meeting

(Continued from Page 400)

The next guest introduced was Charles M. Bielstein, M.D., Oklahoma City. Doctor Bielstein first reviewed the organization and operation of the Professional Advisory Committee. He explained that the committee was comprised of representatives of the medical, hospital, nursing home and osteopathic professions. He stated that monthly meetings had been held throughout the year, and then complimented members of the committee for their cooperation as advisors.

Next, Doctor Bielstein reviewed events during the past year which had affected the Department in its operation of a health care program.

In July, 1960, he said, the program was operating at a deficit and the Oklahoma State Medical Association's House of Delegates approved a 10% across-the-board cutback in remuneration for services, until such time as financial balance was restored.

Before these cutbacks were put in operation, however, the Kerr-Mills Bill became law and provided sufficient increased Federal matching funds to not only restore the cutbacks, but to also expand the scope of the program.

The Kerr-Mills law increased the Federal Government's matching funds for the **welfare** medical care program (thus relieving the financial stress) and authorized new Federal matching funds for the creation of the Medical Assistance to the Aged (MAA) program, a plan to provide medical and hospital benefits to those over age 65 who do not qualify for the welfare program (Old Age Assistance) but are financially unable to meet the costs of illness.

With the Kerr-Mills implementation, Doctor Bielstein said, payments to hospitals have been increased, and an outpatient care program has been developed to provide physician services in the home, physician visits to nursing homes, and outpatient emergency surgical procedures.

With regard to the MAA program (for the near-needy) he told the House of Delegates that the financial criteria for qualification has been recently liberalized, since the original criteria had been so restrictive that the program was not covering enough of the people in need of such benefits.

The new criteria authorizes:

1. Up to $1,500 annual income for a single person; $2,000 for a couple.
2. Up to $8,000 in capital resources or equity in a home.
3. Up to $1,000 in life insurance for a single person; $2,000 for a couple.
4. Up to $1,500 in "tools of trade."
5. Up to $2,500 in small business equity.
6. Up to $700 in other resources for a single person; $1,000 for a couple.

Next, Doctor Bielstein spoke regarding the jurat recently added to the physicians claim form, whereby

the physician agrees to accept the DPW payment as full payment insofar as the Department or the recipient are concerned. He explained that the addition of the jurat did not alter in any way the previous operational policies of the Department, nor did it revoke the long-standing right of the physician to collect any balance due from insurance or the relatives of the recipient.

Doctor Bielstein's presentation provoked much discussion and many questions were raised regarding the two health care programs.

He was questioned regarding the Advisory Committee's role in the Oklahoma Hospital Association's "Operation Echo" (to recover full per diem cost reimbursement on welfare department cases), and he replied that he had no comment to make, since neither the committee nor the OSMA had been consulted by the hospital group in this regard.

Doctor Bielstein's report was accepted on motion by the House of Delegates.

An announcement was made by the Speaker that the 56th Annual Meeting of the Oklahoma State Medican Association would be held in Oklahoma City on May 6-9, 1962. Doctor Hart also announced that Doctor F. J. L. Blasingame, Executive Vice-President of the American Medical Association, would speak to the House of Delegates immediately after the lunch recess.

It was moved that the minutes of the last House of Delegates meeting be adopted as published in the OSMA Journal, and that their reading be dispensed with at this session. The motion was duly seconded and carried.

Doctor Hart then announced that the next order of business was the nomination of officers. He then declared that the House of Delegates was open for nominations for the office of President-Elect (one year term of office). **Doctor J. F. York, Madill, nominated J. Hoyle Carlock, M.D., Ardmore.** There were no further nominations.

The Speaker announced that nominations were open for the office of Vice-President (one year term of office). **Doctor Walter E. Brown, Tulsa, nominated Doctor Peter E. Russo, Oklahoma City.** There were no further nominations.

Nominations were declared open for the office of Delegate to the American Medical Association (two year term of office). The Speaker advised the House that the term of office for the Delegate and Alternate would not commence until January 1, 1962, and that the present incumbents would serve until that time. **Doctor Peter E. Russo, Oklahoma City, nominated Doctor R. Q. Goodwin, Oklahoma City. Doctor Malcom E. Phelps, El Reno, was nominated to succeed himself by Doctor Alpha Johnson, also of El Reno.**

Nominations were then declared open for the office of Alternate Delegate to the American Medical Association (two year term of office). **Doctor Richard H. Burgtorf, Shattuck, was nominated by Doctor J. R. Stacy of Oklahoma City. Doctor Thomas C. Points, Oklahoma City, was nominated by Doctor Richard H. Carpenter, also of Oklahoma City.**

Next on the agenda was the nomination of Councilors for Districts No. 3, 6, 9, 10 and 12:

DISTRICT No. 3. **Avery B. Wight, M.D., Enid, nominated by Paul H. Rempel, M.D., Enid; and, James Petty, M.D., Guthrie, nominated by Louis H. Ritzhaupt, M.D., Guthrie.**

DISTRICT No. 6. **E. E. Shircliff, M.D., Oklahoma City, nominated by Peter E. Russo, M.D., Oklahoma City; and, Vernon D. Cushing, M.D., Oklahoma City, nominated by Peter E. Russo, M.D., Oklahoma City.**

DISTRICT No. 9. **Burdge F. Green, M.D., Stilwell, nominated by William N. Weaver, M.D., Muskogee; and F. R. First, Jr., M.D., Checotah, nominated by William N. Weaver, M.D., Muskogee.**

DISTRICT No. 10. (Replacement to fill the unexpired term of Doctor Paul Kernek who has left the state. Replacement to serve until 1962). **Thurman Shuller, M.D., McAlester, nominated by Hartzell V. Schaff, M.D., Holdenville.**

DISTRICT No. 12. **E. M. Gullatt, M.D., Ada, nominated by John M. Moore, M.D., Pauls Valley; and M. E. Robberson, M.D., Wynnewood, nominated by John M. Moore, M.D., Pauls Valley.**

The next order of business was a report from the Delegates and Alternates to the AMA: Doctor Wilkie D. Hoover, Doctor Joe L. Duer, Doctor Malcom E. Phelps, and Doctor R. Q. Goodwin. Doctors Hoover, Duer and Phelps each reported individually, covering the many items discussed and acted upon at the last AMA meeting in December, 1960, in Washington, D.C. These items included the AMA's stand on the Kerr-Mills Bill, their continued opposition to the Anderson-King-Kennedy Bill, an explanation of the $20 dues increase which is now pending and which is expected to be passed upon during the next meeting of the AMA which will be held in New York City on June 26th, 1961. The AMA delegates explained to the House of Delegates that this increase will be used partially for a scholarship and loan fund to increase the number and quality of medical students throughout the United States. The remainder of the increase will be used for expansion of the public relations program, a continuing education program for practicing physicians, and for medical research.

After the reports of these three delegates, a report from Doctor R. Q. Goodwin, Oklahoma City, was read by the Vice-Speaker of the House, Doctor C. M. Hodgson, Kingfisher. Doctor Goodwin, because of illness, was unable to attend the meeting. In Doctor Goodwin's report, he explained several of the resolutions passed by the AMA at the last meeting. He pointed out that Oklahoma was highly commended for its part in the Medical Assistance to the Aged Program (Kerr-Mills Bill) when an Oklahoma resolution regarding medical care for the aged was read to the Delegation. He stated that so much discussion and commendation were forthcoming that a much stronger resolution was presented to the House by the Reference Committee and

passed unanimously. He further explained other resolutions passed by the AMA House of Delegates pertaining to (1) opposition to professional association between doctors of medicine and doctors of osteopathy, and (2) the creation of a long-range planning board to study anticipated legislative, sociologic and economic trends as related to medical practice and health service.

Doctor Hart then introduced Mr. Rex Baggett, President of the Student AMA, University of Oklahoma Chapter. Mr. Baggett expressed thanks to the Association for its assistance to the students' society and urged continued support of the activities of the Student AMA.

Doctor Walter E. Brown then presented THE COUNCIL REPORT. (See page 415.) This first portion of the report recommended a number of Honorary Life Memberships and also recommended a Certificate of Accomplishment for Doctor Rebecca H. Mason of Chickasha, as requested by the Grady County Medical Society, for her many years of service to the Oklahoma College of Women at Chickasha.

The following motion was made by Doctor Brown: **In view of the difference in context of this portion of the Council Report, I move the adoption of this portion of the report. The motion was seconded by Doctor Peter Russo and carried.**

Doctor Brown continued the reading of the Council Report in its entirety, after which he moved adoption of the Council Report. This motion was seconded and carried.

At 12:00 p.m. the Speaker announced the meeting would adjourn for lunch and would reconvene in the Pompeian Court at 1:30 p.m.

The House of Delegates reconvened at 1:30 p.m. in the Pompeian Court of the Mayo Hotel, Tulsa.

A quorum was declared by the Chairman of the Credentials Committee, Doctor C. Riley Strong.

The next item on the agenda was an address by Doctor F. J. L. Blasingame, Executive Vice-President of the American Medical Association. Doctor Blasingame was introduced by Doctor Walter E. Brown, President of the Oklahoma State Medical Association. Doctor Blasingame brought greetings from the Staff and Officers of the AMA and stressed the importance of the component societies in developing the policies of the AMA, urging members to participate more fully in its activities. Doctor Blasingame, in explaining the financial structure of the AMA, stated that only 23% of its expenditures are underwritten by the doctors. The larger portion of the income is derived from other sources. He explained that the program was being re-evaluated and redeveloped to render better service to physicians and to the public.

He went on to discuss the AMA's stand on the Anderson-King Bill, and commended the physicians of Oklahoma and Senator Kerr for their part in developing and supporting the Kerr-Mills Bill, which resulted in the defeat of Forand-type legislation.

Doctor Hart announced that the next order of business would be the reports from the Association's Councils. He pointed out to the Delegates that the reports were divided into individual sections for each of the Committees under the Councils and each section would be voted on individually.

He also stated that copies of all Council and Committee reports were in the packets handed to the Delegates upon their arrival at the meeting.

Report of the Council on Public Health

This report was read by the Chairman of the Council on Public Health, Doctor Bert T. Brundage, Thomas (see page 417).

Section I—Committee on Aging: **It was moved and seconded that this Section I of the Report be adopted as read. The motion carried.**

Section II—Mental Health Committee: After a lengthy discussion on whether or not the Oklahoma State Medical Association should go on record as endorsing so expensive a program, **it was moved and seconded that this Section II of the Report be adopted as read. The motion carried.**

Section III—Committee on Rehabilitation: **Doctor Malcom E. Phelps moved that the last paragraph on Page 6 be stricken, and on Page 7, Paragraph No. 2 that the words "agency or" be stricken. Doctor Joe L. Duer asked that Doctor Phelps' motion be amended to provide only that the words "agency or" be stricken from Paragraph No. 2 and that Paragraph No. 1 remain in the report. This motion, as amended, was duly seconded and carried.**

Section IV—Civil Defense Committee: **It was moved and seconded that this Section IV of the Report be adopted as read. The motion carried.**

Section V—Liaison Committee to the Public Health Department: After a lengthy discussion, **Doctor G. B. Gathers, Stillwater, moved that Paragraph No. 1 of Section V be amended to read: "It is recommended that routine determination of Rh factors on prenatal S.T.S. be discontinued by the Health Department except on physician request.", striking out the remainder of that paragraph. The motion was duly seconded and carried.**

Doctor Earl Lusk, M.D., Tulsa, moved that Paragraph No. 3 of Section V be deleted. The motion was seconded by Doctor Louis H. Ritzhaupt of Guthrie and carrried.

It was moved and seconded that the word "indigent" be added to the sixth line of Paragraph No. 4, Section V, to read: " . . . to indigent state residents not already covered by the Crippled Children's program."

Doctor Charles Wilbanks, Tulsa, moved that Paragraph 6 of Section V be amended to read: "Recog-

nizing that the Governor's Budget A would decrease the State Health Department's budget by $24,000 annually, the committee recommends an increase in the appropriation for the State Health Department." The motion was seconded by Doctor Ritzhaupt and carried.

Doctor Earl Lusk moved that the report, as amended, be adopted by the House of Delegates. The motion was seconded by Doctor Joe L. Duer and carried.

Report of the Council on Public Policy

The report was read by J. R. Stacy, M.D., Chairman of the Council on Public Policy (see page 421).

Section I—State Legislative Committee: **It was moved by Doctor Walter E. Brown that this Section I be adopted as read. The motion was duly seconded and carried.**

Section II—Federal Legislative Committee: **It was moved and seconded that this Section II of the report be adopted as read. The motion carried.**

Section III—Grievance Committee: **It was moved and seconded that this Section III of the report be adopted as read. The motion carried.**

Report of the Council on Insurance

The report was read by Doctor Bruce R. Hinson, Chairman of the Council on Insurance (see page 422).

It was moved and seconded that the entire report of the Council on Insurance be adopted as read. The motion carried.

Report of the Council on Professional Education

The report was read by Doctor R. R. Hannas, Jr., Chairman of the Council on Professional Education (see page 422).

It was moved and seconded that the entire report of the Council on Professional Education be adopted as read. The motion carried.

Report of the Council on Socio-Economic Activities

The report was read by Mark R. Johnson, M.D., Chairman of the Council on Socio-Economic Activities (see page 423).

It was moved and seconded that Sections I, II, and III be adopted as read. The motion carried.

Although there was a great deal of opposition to the California Relative Value Schedule, as set out in Section IV of the Report, after a lengthy discussion, **it was moved by Doctor G. B. Gathers and seconded by Doctor Bruce R. Hinson that this Section IV be adopted as read. The motion carried.**

The Amendments to the Constitution and By-Laws were read by Doctor E. K. Norfleet, a member of the Committee on Constitution and By-Laws, to be acted upon during the Closing Session.

The following resolutions, received by the Executive Office thirty days prior to the meeting, were read by the representatives of the respective county societies, to be acted upon during the Closing Session:

Resolution No. 1, sponsored by the Canadian County Medical Society, entitled "Opposing A.C.S. Action Regarding Surgical Assistants," referred to the Miscellaneous Business Committee.

Resolution No. 2, sponsored by the Tillman County Medical Society, entitled "Use of Term 'Doctor'," referred to the Legislation and Public Policy Committee.

Resolution No. 3, sponsored by the Tillman County Medical Society, entitled "Advance Council Report to County Societies," referred to the Miscellaneous Business Committee.

Resolution No. 4, sponsored by the Tillman County Medical Society, entitled "Abuse of Welfare," referred to the Insurance and Medical Service Committee.

Resolution No. 5, sponsored by the Tulsa County Medical Society, entitled "Opposition to Service Contracts with Insurance Carriers," referred to the Insurance and Medical Service Committee.

Resolution No. 6, sponsored by the Tulsa County Medical Society, entitled "Proposed Increase in AMA Dues," referred to the Miscellaneous Business Committee.

Resolution No. 7, sponsored by the Oklahoma County Medical Society, entitled "Alternative to $20 AMA Dues Increase," referred to the Miscellaneous Business Committee.

Resolution No. 8, sponsored by the Tulsa County Medical Society, entitled "Proposed Study of Nursing Homes in the State of Oklahoma," referred to the Insurance and Medical Service Committee.

Resolution No. 9, sponsored by the Tulsa County Medical Society, entitled "Restatement of Opposition to Corporate Practice of Medicine," referred to the Constitution and By-Laws Committee.

Resolution No. 10, sponsored by the Tulsa County Medical Society, entitled "Enactment of a 'Good Samaritan' Statute by the Oklahoma State Legislature," referred to Legislation and Public Policy Committee.

Resolution No. 11, sponsored by the Tulsa County Medical Society, entitled "Legislation to Establish a Medical Examiner System in Oklahoma," referred to the Legislation and Public Policy Committee.

Resolution No. 12, sponsored by the Oklahoma County Medical Society, entitled "Determination of Need and Provision of Care to Those Over Age 60," referred to the Insurance and Medical Service Committee.

Resolution No. 13, sponsored by Wilkie D. Hoover, M.D., Malcom E. Phelps, M.D., Joe L. Duer, M.D., and R. Q. Goodwin, M.D., entitled "Discontinuation of Scientific Portion of AMA Mid-Winter Meeting," referred to the Miscellaneous Business Committee.

Resolution No. 14, sponsored by the Pottawatomie

County Medical Society, entitled "Appointments to Blue Cross-Blue Shield Boards," referred to the Insurance and Medical Service Committee.

Resolution No. 15, sponsored by the Kay-Noble District Society, entitled "Education Program—Alcoholism," referred to the Legislation and Public Policy Committee.

Doctor Hart then asked for any additional resolutions. The following three resolutions, recommended by the Council, were read to the Delegates, to be acted upon during the Closing Session:

Resolution No. 16, entitled "School of Dentistry," referred to the Public Policy and Legislation Committee.

Resolution No. 17, entitled "Pilot Training Program on General Practice," referred to the Legislation and Public Policy Committee.

Resolution No. 18, entitled "Merger of the California Medical Association and the California Osteopathic Association," referred to the Legislation and Public Policy Committee.

Doctor Hart then advised that the last order of business in the Opening Session of the House of Delegates would be the reading of the Necrology Report. Doctor Hart turned the Chair to Doctor C. M. Hodgson, Vice-Speaker of the House of Delegates, for this presentation. Doctor Hodgson requested that the Delegates stand during the reading of the Necrology Report (see page 424).

Following the reading of the Necrology Report, Doctor Hart then resumed the Chair and announced that the Delegates of the Oklahoma State Medical Association would stand recessed at 5:50 p.m. to reconvene at 8:00 p.m. He announced that during this time the Reference Committees would meet to discuss the Resolutions referred to them. Doctor Hart invited any Delegate to attend the meetings if he so desired.

ATTACHMENTS TO OFFICIAL PROCEEDINGS

RESOLUTION

ENROLLED SENATE
CONCURRENT
RESOLUTION NO. 21

BY: ROGERS, COBB, GRAVES, HARRIS, LAND, McCLENDON, PAYNE, ROMANG, SHOEMAKE, and TIPPS of the Senate
and

ANDREWS, ATKINSON, BAGGETT, BLANKENSHIP, BRADLEY (Tulsa), CAMP, COLE, CONVERSE, DYER, FORSYTHE, HAWORTH, HOPKINS, HOWARD, JOHNSTON, JONES, KEYES, McCARTY, McCUNE, PAGE, REDMAN, RICHESON, RUBY, SETTLES, SKAGGS, SPRAKER, TAGGART, TALIAFERRO, WILLIAMS (Carter), ABBOTT, ALLARD, AVEY, BATSON, BERNARD, BILYEU, BLACKARD, BOND, BOWER, BRADLEY (Jefferson), BRISCOE, BULLARD, BURKETT, BURNHAM, BYNUM, CLARK, COOK, COX, CRAIG (Kay), CRAIG (Lincoln), DIEL, DOLEZAL, DOORNBOS, EIDSON, ETLING, FINCH, FITCH, FOGARTY, FORD, FOWLER, GOODFELLLOW, GREEN, GREENHAW, HARPER, HENRY, HESSER, HOLCOMB, HOLDER, HOWE, HOWZE, HURST, INMAN, KARDOKUS, KARNES, LANCE, LARASON, LAUER, LEVERGOOD, McCHRISTIAN, McCUE, MASSEY, METCALF, MOAD, MORGAN, MOUNTFORD, MURROW, NICHOLS (Dewey), NICHOLS (Seminole), NORTHCUTT, ODOM (McIntosh), ODOM (Wagoner), OGDEN, PATTERSON, POYNOR, PRIEBE, PRIVETT, RENEAU, RICHARDSON, SANGUIN, SARE, SHIBLEY, SHIPLEY, SKEITH, SMITH, SPARKMAN, SPARKS, STEVENS, STRICKLAND, SULLIVAN, TATE, THOMAS, TINKER, TRAW, TUCKER, VANDIVER, VAN HOOSER, WATKINS, WILHELM, WILLIAMS (Murray), WILLIS (Cherokee), WILLIS (Jackson), WITT, and WOLF of the House

A CONCURRENT RESOLUTION RELATING TO THE PROGRAM OF THE GOVERNOR'S COMMITTEE ON EMPLOYMENT OF THE HANDICAPPED; EXPRESSING APPRECIATION TO VARIOUS ORGANIZATIONS, INSTITUTIONS, AND OFFICIALS FOR THEIR COOPERATION AND SUPPORT OF CREATING PUBLIC INTEREST ON THE REHABILITATION AND EMPLOYMENT OF THE HANDICAPPED WORKERS.

WHEREAS, the Oklahoma Legislature created the Governor's Committee on Employment of the Handicapped for the purpose of carrying on a continued program to promote the employment of physically, mentally, emotionally, and otherwise handicapped citizens of Oklahoma; and

WHEREAS, the membership of the Governor's Committee consists of leaders of labor, industry, business, veterans, women's, fraternal, welfare, religious, medical, and other professions, groups, or individuals, serving without compensation, striving to create statewide interest in the rehabilitation and employment of the handicapped worker; and

WHEREAS, the Governor's Citizens Committee has developed a most effective program in acquainting the public with the serious problem facing our state in regard to increased unemployment due to disability and age; and

WHEREAS, one of the most effective means of acquainting the public has been the annual essay contest, sponsored by the President's and Governor's Committees on Employment of the Handicapped, for high school juniors and seniors, thereby causing our students to become acquainted with this social problem and the need of providing increased employment to the handicapped and aged workers; and

WHEREAS, participation in such contest has increased from five schools in 1955 to one hundred seventy-nine in 1961; and student participation has increased from twenty in 1955 to more than four thousand in 1961; and teachers making the essay

contest a class project have increased from zero in 1955 to one hundred forty-seven in 1961; and

WHEREAS, the essay contest has resulted in increased interest throughout the State of Oklahoma, not only among the students, but among the handicapped, employers, and the general public to such an extent more employers are giving the handicapped worker increased job opportunities, and many handicapped persons are being encouraged to seek rehabilitation so that they, too, may become gainfully employed; and

WHEREAS, the essay contest, sponsored by the Governor's Committee, could not be effective without the contributions of savings bonds, expense-paid trips, savings certificate, plaques, scholarships, and the active support of college and high school officials, and especially the classroom teachers; and

WHEREAS, the following organizations and institutions have been particularly active in assisting the promotion of increased public interest in the rehabilitation and employment of handicapped workers: Oklahoma Association of Insurance Agents, Oklahoma State AFL-CIO, Associated Industries of Oklahoma, Oklahoma State Medical Association, Goodwill Industries of Oklahoma, Tinker Administrative Club, Disabled Veterans of Oklahoma, American Legion of Oklahoma, Veterans of Foreign Wars of Oklahoma, FAA Employees Association, Oklahoma Federation of Business and Professional Women's Clubs, Oklahoma Press Association, Oklahoma Rehabilitation Association, Oklahoma State Bar Association, President's Committee on Employment of the Handicapped, Governor's Committee on Employment of the Handicapped; Presidents of: Southeastern State College, Durant; University of Oklahoma, Norman; Oklahoma State University, Stillwater; Langston University, Langston; Northeastern State College, Tahlequah; Northwestern State College, Alva; Central State College, Edmond; East Central State College, Ada; Oklahoma Baptist University, Shawnee; Oklahoma State Tech, Okmulgee; Eastern State College, Wilburton; Connors State College, Warner; Cameron State College, Lawton; Oklahoma College for Women, Chickasha; Panhandle A & M College, Goodwell; Oklahoma Military Academy, Claremore; Tulsa University, Tulsa; Oklahoma City University, Oklahoma City; and Phillips University, Enid.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE OF THE TWENTY-EIGHTH LEGISLATURE OF THE STATE OF OKLAHOMA, THE HOUSE OF REPRESENTATIVES CONCURRING THEREIN:

SECTION 1. That the Twenty-eighth Session of the Oklahoma Legislature expresses appreciation to the colleges and organizations sponsoring awards for winners of the essay contest, and to the programs of the Governor's Committee.

SECTION 2. That the Twenty-eighth Session of the Oklahoma Legislature acknowledges the cooperation and support of the Chancellor of Higher Regents, presidents of state and private colleges, Superintendent of Public Instruction, high school principals and superintendents, Oklahoma Council of Teachers of English, and the individual classroom teachers for the successful performance of the essay contest.

SECTION 3. That the legislature hereby extends its appreciation and gratitude to the members of the Governor's Committee, members of the mayors' committees, and all organizations and persons who by contributing their time and service without compensation have helped provide increased employment and rehabilitation to our disabled and aged citizens.

SECTION 4. That a copy of this resolution be made part of the permanent journal of this legislative session as a token of appreciation for this outstanding support of the handicapped program in Oklahoma.

Adopted by the Senate the 22d day of March, 1961.

CLETA JOHN ROGERS
Acting President of the Senate

Adopted by the House of Representatives the 28th day of March, 1961.

J. D. McCARTY
Speaker of the House of Representatives

CERTIFICATION

STATE OF OKLAHOMA)
) ss
COUNTY OF OKLAHOMA)

I, Leo Winters, Secretary of the Senate of the State of Oklahoma, do hereby certify that the above and foregoing is a true and correct copy of Enrolled Senate Concurrent Resolution No. 21 as the same was adopted by the Senate and House of Representatives of the Twenty-eighth Legislature of the State of Oklahoma, the original hereof being on file in the office of the Secretary of State of the State of Oklahoma.

WITNESS my hand and the seal of my office at the State Capitol this 6 day of April, 1961.

[SEAL of State of Oklahoma]

LEO WINTERS
Secretary of the Senate

COUNCIL REPORT

1961

This is the routine Council report for the immediate preceding twelve months operation of the Oklahoma State Medical Association which is presented to you annually by the President of the Association.

Membership

Paid memberships issued	1,541
Honorary life members	119
Junior memberships issued	39
Associate members	5
Military memberships issued	3
Total	1,717

It is of interest to note that we have added 35 new members this year.

Honorary Life Memberships

Honorary life memberships pending for 1961 have been duly requested for the following physicians:

Marguerite M. Baker, M.D., Oklahoma City
Austin H. Bell, M.D., Oklahoma City
S. D. Bevill, M.D., Poteau
Daisy G. Cotten, M.D., Oklahoma City
J. E. Hollis, M.D., Bristow
Basil A. Hayes, M.D., Oklahoma City
J. C. MacDonald, M.D., Oklahoma City
Rebecca H. Mason, M.D., Chickasha
Chester A. Pavy, M.D., Tulsa
E. B. Thomasson, M.D., Duncan
F. L. Underwood, M.D., Tulsa
N. Stuart White, M.D., Tulsa

Certificate of Accomplishment Pending 1961

A certificate of accomplishment has been duly requested for

Rebecca H. Mason, M.D., Chickasha

Finance and Budget

The financial status of the Oklahoma State Medical Association, Inc., is reflected in the audit report of December 31, 1960, as executed by the H. E. Cole Company, Public Accountants, Plaza Court, Oklahoma City 3, Oklahoma. This audit is open for inspection by any member in good standing of the Association at the headquarters building in Oklahoma City.

Briefly, the audit as of December 31, 1960, revealed the following:

Income	
Dues	$69,500.75
Annual meeting income	10,953.00
Journal income	50,203.84
Interest accumulation	1,461.81
Miscellaneous income	960.87
Total	$133,080.27
Expenses	
General administrative expense	$58,058.08
Journal	48,078.43
Annual meeting	13,472.84
Council and committee	390.12
Travel, out-of-state (Delegates, officers, committees)	8,757.50
Total	$128,756.97

This is a net income over operating expense of $4,323.30. The Association has the following funds on deposit in interest bearing accounts:

Ponca City Savings & Loan Association	$10,000.00
Home Savings & Loan Association, Lawton	10,000.00
Home Savings & Loan Association, Bartlesville	10,000.00
Durant Savings & Loan Association	10,000.00
Total	$40,000.00

The income from these deposits at a 4 per cent rate comes to $1,600.00 annually.

The Association also has on deposit in the Utica Square National Bank at Tulsa, $1,461.81; Liberty National Bank and Trust Company, Oklahoma City, $1,000.00. This total of $2,461.81 draws 3 per cent interest and is maintained as a small quickly available cash reserve.

On the basis of a total operating expense last year of $128,756.97, as noted above, it is assumed that the operating expenses this year will be in the neighborhood of $130,000.00, which figures $32,500.00 each quarter. With an actual income during the first quarter of $107,327.98, it was assumed rational to deposit another $10,000.00 in savings and loan, and this deposit was made two days ago in the Tulsa Federal Savings & Loan Association. This gives the Oklahoma State Medical Association a total of $52,461.81 on deposit in interest bearing accounts. This accumulation of funds is in line with the recommendation of the Council and approval of the House of Delegates at our 1959 meeting to create a reserve fund of at least one year's operating expense.

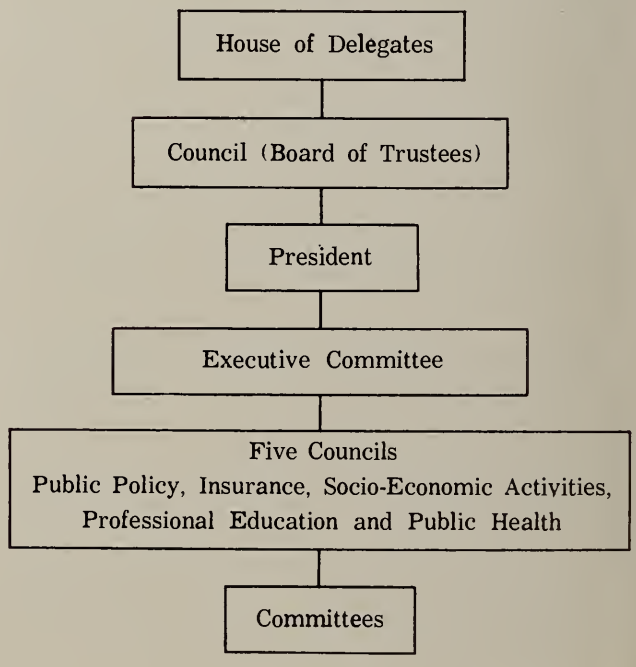
A proposed budget for the 1961-62 year's operation is submitted in the amount of $130,000.00 based on the following approximated figures:

General administrative expense	$58,000.00
Journal	48,500.00
Annual meeting	14,500.00
Council and Committees	2,500.00
Travel, out-of-state for Delegates, officers, committees, etc.	7,500.00
Total	$130,000.00

The income expected to resolve this budget is as follows:

Dues	$69,500.00
Annual meeting	9,500.00
Journal	50,000.00
Interest	1,700.00
Miscellaneous	1,000.00
Total	$131,700.00

Administrative Structure



This administrative setup was first suggested by Doctor Mohler in his Council Report of 1959 and put into operation that year by Doctor Baker. It seemed to work satisfactorily and was continued in operation this past year. With two years successful working of the plan, it is now recommended that the Constitution and Bylaws be altered to provide for a permanent setup of this structure of administration in the Oklahoma State Medical Association.

The change-over is technically a little bit difficult in changing the Council to the Board of Trustees. With the 28 Councilors and 13 general officers, this will make a Board of Trustees numbering 41 total. It will also require a very great number of alterations in the Constitution and Bylaws wherein each time the Council is referred to, the wording will be changed to Board of Trustees.

In this regard, an amendment to the Bylaws is being submitted to you today and to the House of Delegates tomorrow wherein the Council is empowered to elect an Executive Committee based on nominations made by the President. It is felt that if the Executive Committee is so elected that it should take a more definite place in the administration and that considerable would be gained if this committee met each month at the headquarters building in Oklahoma City. It is further recommended that travel and subsistence pay be rendered to the members of the Executive Committee if monthly meetings with required attendance are established.

Annual Meeting

For the 1961 annual meeting here in Tulsa, under the direction of Doctor C. S. Lewis, Jr., as General Chairman and Doctor Donald L. Brawner as Program Chairman, an attempt has been made to schedule the meeting to take place partially on the week end in hopes of enticing more doctors to attend. It is for this reason that the scientific sessions were started at 10:00 o'clock on Sunday morning to continue through Monday and Tuesday with the traditional Wednesday half day meeting eliminated. Actually, it was hoped that the meeting might be held on a Friday, Saturday and Sunday, but this was impossible to work out due to previous commitments by the hotel here for these particular dates.

The Council commends Doctors Lewis and Brawner and the entire committee structure for the exhaustive work done in setting up the meeting this year.

The 1962 meeting of the Association is scheduled for May 6, 7, 8 and 9 in Oklahoma City.

Journal

The Journal of the Oklahoma State Medical Association showed an increase in number of pages of copy during the past year, 882 pages as compared to 840 pages in 1959. The advertising copy, however, showed a sharp drop from a total of 1,035 pages in 1959 to 799 pages this past year. This will be reflected in a drop in revenue from advertising and further retrenchment by the pharmaceutical houses in their advertising campaigns is to be expected.

The Council wishes to cite Don Blair for the excellent format attained by the Journal this year. The text has been ably selected and in part composed by the Editor-in-Chief, Doctor Ben Nicholson. Formal thanks are hereby tendered Doctor Nicholson and his entire staff.

Respectfully submitted,
WALTER E. BROWN, M.D.
President

COUNCIL ON PUBLIC HEALTH

Bert T. Brundage, M.D., Chairman

The Council on Public Health is comprised of the following Committees:

Aging: Doctor J. Walker Morledge, Oklahoma City, Chairman (Section I).

Mental Health: Doctor George H. Guthrey, Oklahome City, Chairman (Section II).

Cancer: Doctor Joe M. Parker, Oklahoma City, Chairman.

School Health: Doctor Robert D. Shuttee, Enid, Chairman.

Rehabilitation: Doctor Earl D. McBride, Oklahoma City, Chairman (Section III).

Civil Defense: Doctor William H. Reiff, Oklahoma City, Chairman (Section IV).

Liaison Committee to the Health Department: Doctor Paul D. Erwin, Oklahoma City, Chairman (Section V).

High School Athletic Injuries: Doctor G. B. Gathers, Jr., Stillwater, Chairman.

The Committees on Cancer and School Health did not meet during the year; therefore, no report was presented. Also, no report was received from the Sub-Committee on High School Athletic Injuries.

Section I

The Committee on Aging began its year with an all-out effort on the Oklahoma Conference on Aging. This conference held June 7-9, in Norman, was the state-level forerunner of the President's White House Conference on Aging, held January 9-12, 1961, in Washington, D.C.

In preparation for the Oklahoma Conference, many "Committee on Aging" members participated in the development of fact-finding reports. Immediately prior to the meeting in Norman, an appeal was made to committee members and the Woman's Auxiliary to attend the Conference, and thereby assure the Oklahoma State Medical Association of adequate professional representation.

The response to the appeal was gratifying; of the four hundred conference registrants, over fifty were physicians or auxiliary members. Organized medicine

was well represented in all of the section meetings and in the general session which concluded the conference.

Since the recommendations emanating from the conference were printed in the July, 1960 issue of the Journal, they will not be reported again here. Suffice to say the committee was directly responsible for the vote opposing Social Security financing of health care.

The National Conference

As in the case of the Oklahoma Conference, the proceedings of the President's White House Conference were reported in the February, 1961 issue of the Journal.

The outcome, however, was disappointing since the "Section on Income Maintenance" (including the financing of Health Care cost), went on record in favor of Social Security Health Legislation. Many other sections differed with this view, but proponents of HR 4222 will utilize this section's vote in their attempt to socialize care for the aged.

Six members of Oklahoma's twenty-four delegates were physicians.

Committee Recommendations

1. Your committee observes that many worthwhile recommendations to improve the health care of the aged evolved from both conferences, and recommends continued interest and action on the part of the Oklahoma State Medical Association.

   a. The recommendations, particularly those aimed at state and local participation, should be studied and screened by the succeeding OSMA Committee on Aging, and next year's efforts should be concentrated on one or two practical objectives.

2. Your committee recommends that a statewide study be undertaken in Oklahoma, to determine the scope of care presently available to the elderly and to advise any corrective action which may be shown to be necessary.

3. Your committee urges all county medical societies to develop or accelerate their interest in the health and welfare problems of the aged at the community level, since it is felt that community action is the starting place for proving optimum health care for people of all ages.

Section II

The Mental Health Committee feels the following items are of prime importance for the present and future mental health needs of our state. We hope that the Oklahoma State Medical Association will go on record endorsing these recommendations and that they can be implemented particularly in the legislative department of our state government.

1. Competitive salaries for professional and non-professional employees. The base pay of our many non-professional employees in our state mental institutions is not nearly high enough to attract qualified persons. With adequate funds, more qualified professional and non-professional individuals could be actually engaged in treatment procedures. With better and more intensive treatment, a greater number of patients could be treated, and the turnover rate increased, thereby increasing the value of each dollar spent.

2. Because of our lack of funds for hiring an adequate number of trained people, it has become imperative that we expand our training facilities for not only psychiatrists, but nurses, social workers, and clinical psychologists. These training programs which require additional funds are the only answer to our personnel shortage since it is nearly impossible to recruit these people from outside the state.

3. There is great need to increase after-care facilities. These after-care facilities include not only adequate out-patient services, but also day hospitals located in heavily populated areas. If the mental patient could receive treatment on a community level, fewer problems would arise along social and economic lines, and the tremendous shortage of bed spaces in our large mental institutions would be reduced. Also included in after-care services would be providing sheltered workshops for mental patients and the mentally retarded who require continued supervision rather than necessarily needing hospitalization. These workshops could allow patients to be productive and contribute to their own support and to the support of their families outside the institutional setting. Also follow-up of patients after their release from mental hospitals is an important phase of after-care, particularly social service departments in the various state institutions, need strengthening with additional workers and more qualified people. These people could provide support to the patient and to the agencies in the community who are working with the patient after his release from the mental hospital.

4. Adequate funds for the establishment of a hospital or center for the treatment of emotionally ill children is sorely needed in our state. We have no such facility in existence at this time.

5. Special facilities are also needed for the treatment of alcoholics and drug addicts. At present there are no such facilities in our state.

6. Liberalizing of admission procedures to our various state institutions are also needed by means of modifying existing state mental health laws.

7. An important part of any growing and productive treatment center is an expansion and greater emphasis on research. This can be incorporated as a part of a training program in all the various state institutions.

8. With the increase in training facilities more psychiatrists can be available for practice in smaller towns and communities in our state; thereby, preventing much of the increasing load of patients requiring hospitalization. The training and treatment facilities at the Oklahoma University Medical Center are particularly needed. Currently there are only twenty in-

patient beds at the medical center provided for psychiatry even though the building facilities have been completed for many years. The staffing of these beds is not possible with present appropriations. Expansion of these facilities would aid materially in providing necessary, trained personnel in our state.

9. A special center should be provided for treatment of criminally insane. This could best be accomplished by the establishment of a psychiatric treatment center at our state penitentiary at McAlester.

10. The State Medical Association could aid materially in the education of the public in regard to mental health principles by support and continued cooperation with the laymen's organizations, the Oklahoma State Association for Mental Health, which has chapters in sixty of our state counties.

Section III

Last year, your Committee approved and reported the following recommendation:

"A medical diagnostic rehabilitation facility (should) be established at the University of Oklahoma Medical Center, to which disabled individuals could, by proper referral, be evaluated en toto through a team approach of all medical specialists and co-medical personnel to determine and coordinate the individual's rehabilitation objective and treatment with the necessary cooperation of all private and public groups and agencies that might be so concerned."

Since that time, the Special Committee on Rehabilitation Services (State Legislative Council) has concurred in the recommendation of the Oklahoma State Medical Association committee.

Officials of the University of Oklahoma Medical Center have been consulted by the legislative group and a plan has been devised which appears to closely parallel the original recommendation of your committee. It is anticipated that a diagnostic and evaluation service will be initiated at the school in a limited way on July 1, 1961.

Legislation to authorize the establishment of this center is now being proposed. It is your committee's understanding that this legislation will require that all patients referred to the center must have first been seen by a practicing physician. Furthermore, the committee is told that all patients will be referred back to their local physicians for treatment or remedial surgery. Only those who require intensive rehabilitation programs not available through the local community will be treated at the center.

Since the final bill has not been submitted to your committee, this report does not request an endorsement of the program. Suffice to request that your committee be authorized to continue to assist in the planning of this worthwhile undertaking.

Along this line, your committee has recently reviewed its original action, and has further delineated its position through the following interpretations:

1. Patients could be referred to this facility from any state or local agency, such as the Department of Public Welfare, Department of Vocational Rehabilitation, Industrial Commission, or State Health Department, or from a private physician.

2. The facility should be an evaluation center, so equipped with personnel and facilities to be able to estimate the existing disabilities and what degree of recovery could be anticipated from the proper type of treatment. The patient should then be referred back to his referring physician along with the recommended treatment.

In another committee activity during the past year, an Oklahoma State Medical Association exhibit was prepared for the National Rehabilitation Association meeting, held in October in Oklahoma City. The purpose of this thirty-foot display was to portray the physician's role in providing professional rehabilitation services. It was an outstanding, professionally-staffed display, and was well attended by the two thousand persons who attended the national meeting.

Section IV

If you will note, committee members represent the medical and surgical, public health, military, naval, civil defense, and administrative facets of the Disaster Mobilization problem.

Committee Responsibility

Disaster Medical Care is the only facet of Civil Defense which is not directly under community, local, state or federal government control. This fact places a tremendous responsibility on the medical profession to prove that private enterprise is capable of responding to emergency situations as well as do governmental agencies, such as fire and police departments.

The State Medical Association and the State Health Department are mutually responsible for Disaster Medical Care and extremely close coordination between the two is required. The Medical Association is the operational agency for the actual CARE, but the State Health Department has been designated by the State Plan as being responsible for this activity, and in addition has the allied health personnel, public health, sanitation, and radiation survey problems.

The AMA published a study on the medical care problem at the request of the OCDM. The OSMA is likewise cooperating with the State Health Department. The coordination is so close that the OSMA-CD Chairman is on the staff of the commissioner and the commissioner is on our CD Committee. This would seem to be an ideal arrangement.

The responsibilities of this committee are as follows:

a. Planning, education and training, and otherwise preparing for Disaster Medical Care.

b. Coordination with allied health professions, hospital, sanitary, and public health personnel via the State Health Department.

Both responsibilities are being exploited.

Activities

1. Committee Meetings.

The Committee has had two formal meetings with nearly 100 per cent attendance, plus important guests.

2. National and Regional Meetings.

The committee has been represented at the national meeting on Disaster Medical Care at the Palmer House in Chicago, November 4-6, 1960, at the regional meeting of the AMA Committee on Disaster Medical Care at the Roosevelt Hotel, New Orleans, February 19, 1961.

3. Journal OSMA Disaster Medical Care Issue.

The entire May issue of the Journal of the OSMA is being devoted to Disaster Medical Care. The editorial, the president's page, the auxiliary page, and special and scientific articles, and the news will all be slanted toward explaining the threat we face; the national, state and local plans; and some details on handling mass casualties. This should be a great issue.

4. More Interest.

There is much more interest in the subject as evidenced by:

a) Visitors at our meetings.

b) Contributions to our Journal issue by several physicians in the state.

c) Attendance at various conferences by several physicians from the OSMA.

d) Attendance at various MEND short courses, conferences, and/or meetings on the subject by approximately 100 state physicians.

e) Establishment of CD library and files at the OSMA Headquarters, duplicated at the Oklahoma State Department of Health.

f) Participation of committee members and other physicians in speaking to outside groups—P.T.A., military, school and hospital staffs.

g) Prepositioning of active CD emergency hospitals throughout the state.

5. Liaison with Other OSMA Committees.

a) The committee has encouraged the Legislative Committee to proceed with "Good Samaritan" type legislation.

b) The committee has met with the Postgraduate Education committee concerning Disaster Medical Education, either as a separate postgraduate medical course or in the form of lectures at county medical societies and/or hospital staffs.

6. Exhibit Planned for State Meeting.

The committee has reserved space for an exhibit at the State Meeting and hopes to have a model of the 200-bed CDEH (Civil Defense Emergency Hospital).

7. Civil Defense Coordinator Appointed for Oklahoma State Health Department.

Although not a result of this committee's work, the appointment of Major Charles W. Dutreau, U.S. Army Retired, as Civil Defense Coordinator at the Oklahoma State Department of Health, was hailed by the committee as a real step forward. Liaison between physicians, hospitals, allied health personnel have been shifted to Major Dutreau's office.

8. MEND Program Active.

Another program which was not the product of this committee, but which program is vital to the success of this committee's function is the MEND program at the University of Oklahoma School of Medicine. Outstanding guest lecturers, instruction by the O.U. faculty, and visual education has been integrated into the regular curriculum at the school.

Recommendations and Future Projects

The Civil Defense Committee recommends that:

1. Name.

The name of this committee be changed to "DISASTER MEDICAL CARE" committee, to conform with the AMA committees.

2. Appointments.

The chairman of the committee be appointed for a two-year period, or that the "chairman-elect" be known a year in advance, so that his personal education could be more fully developed.

3. State Plan.

The committee assist and advise the State Commissioner of Health on the re-writes of the Health Annex to the Oklahoma State Plan.

4. Council on Allied Health Personnel.

The OSMA officially recommend to the Governor and the Commissioner of Health that representatives of all the allied health disciplines be organized into a council as "special staff" for the Director of Disaster Medical Care.

5. Stockpiling Supplies.

That all physicians in the state be encouraged to "stockpile" the medical supplies which they constantly use in their practice. It seems there are no drug manufacturers in the state, and wholesale drug houses do not carry large inventories.

6. Registration.

That the OSMA urge the Governor or State Legislature to institute a state-wide registration of **ALL** (not limited to medical) citizens, particularly with regard to any propensities which might be utilized in disaster medical care such as: a) previous military experience; b) experience in radiation sickness; c) experience in mass feeding; etc. The Civil Defense Committee's future projects include:

1. County society coordination—mutual assistance.
2. Identification cards and assignments.
3. Staffs for the fourteen prepositioned CDEH.
4. Prepositioned supplies; emergency treatment-type station.
5. Medical supply problem.

Section V

On the several occasions when this committee has met during the past year, it has made a sincere effort to counsel with representatives of the State Health Department and to form recommendations to its parent group, the Council on Public Health, along lines mutually acceptable to the profession and the department.

Significant among the actions taken this year are the following, which were transmitted to the Council on Public Health for final judgment.

1. It is recommended that routine determination of Rh factors on prenatal S.T.S. be discontinued by the Health Department, except on physician request.
2. The committee recognizes the concern of the Health Department over distribution and administration problems which may be faced with the advent of live polio vaccine. It recommends that special measures be taken soon by the Council on Public Health to minimize future problems.
4. The penicillin phrophylaxis program of the Health Department to provide penicillin for rheumatic fever and rheumatic heart disease cases is recommended for approval. Under this program, jointly sponsored by the Health Department and the Oklahoma State Heart Association, bicillin and buffered potassium penicillin G are supplied through private physicians and/or county health units to indigent state residents not already covered by the Crippled Children's program.

   The penicillin is issued on prescription from the physician, and is available through the county health department. This program is designed to demonstrate the value of this type of applied preventive medicine. At the same time, no patient is denied the benefits of continuous prophylaxis because of financial inability to obtain the penicillin.
5. Regarding House Joint Resolution 511, a resolution recognizing the Oklahoma Nursing Home Association as an evaluation agency to classify homes for welfare payment purposes, the committee supports the commendatory nature of the resolution, but believes the evaluation of nursing homes should properly remain the function of an existing state department. It is therefore recommended that the resolution should only commend the program as one of accreditation.
6. Recognizing that the Governor's Budget A would decrease the State Health Department's budget by $24,000 annually, the committee recommends an increase in the appropriation for the State Health Department.

The Council on Public Health also wishes to go on record in recommending to the House of Delegates the addition of a Committee on Highway Safety. This to coincide with the proper committee now functioning nationally under the AMA. The Council felt a tremendous amount of good could be done by this committee in furnishing materials, speakers, etc. to civic bodies, and possibly a great number of lives could be saved by its function.

Last but not least the Council felt that committees and their members should be active throughout the year and through their actions all facets of problems could be discussed and possibly solved, thus relieving the Executive Board and the Executive Staff of much unnecessary work and worry.

This concludes the annual report of the Council on Public Health.

COUNCIL ON PUBLIC POLICY

J. R. Stacy, M.D., Chairman

The Council on Public Policy is comprised of the following Committees:

State Legislative: R. Q. Goodwin, M.D., Chairman (Section I).

Federal Legislative: J. R. Stacy, M.D., Chairman (Section II).

Medico-Legal Relations: Marshall O. Hart, M.D., Chairman.

Grievance: Bruce R. Hinson, M.D., Chairman (Section III).

SECTION I

The State Legislature has numerous measures before it, including appropriations for the State Health Department, Mental Health, etc. Your committee, however, is particularly interested in the following bills:

Senate Bill 81: The medical examiner bill has been passed by the Senate, but has been held on the calendar by a motion of Senator Dacus to reconsider the vote by which it was passed.

House Bill 1024: Providing for the legal corporate practice of medicine in the state has been introduced in the House.

Senate Bill 291: The "Good Samaritan" Bill, providing for immunity from civil action when emergency help is rendered at the site of an accident, is pending in the Senate.

House Bill 892: Provides for the creation of a medical panel to review differences of opinion between physicians. The bill is in the House Committee on Insurance and there has been no hearing.

SECTION II

During the past year the problems of Federal Legislation have principally been the threat and defeat of the Forand Bill and the enactment of the Kerr-Mills Bill.

Our current concern in this session of Congress is the Anderson-King-Kennedy bill. It provides social security hospital coverage for those receiving social security benefits. It provides professional fees paid through the hospitals to radiologists, pathologists, anesthestists, psychiatrists, interns, residents and any other physician-employees of a hospital. This bill is labeled by the administration as not being a socialized medical bill in as much as it does not provide direct payment of fees to physicians. The AMA has officially opposed such a misleading interpretation to the public. The bill is a big step toward federal and hospital control of our profession. It also further amplifies the unsound social security program.

Every effort should be made to educate our professional and lay associates on this dangerous and expensive program. The House of Representatives Ways and Means Committee should be repeatedly contacted expressing our opposition to further Federal medical activity of any sort.

Your Committee on Federal Legislation made numerous personal and indirect contacts with our Senators and Congressmen in opposition to the Forand Bill. Our county medical societies cooperated well in these efforts. Meetings were held with other professional groups to engage their support.

Your committee made no recommendation regarding its stand on the Kerr-Mills bill in deference to

the stand of the AMA. Fortunately, there was no necessity to encourage its enactment in the State of Oklahoma.

The Tulsa and Oklahoma County Medical Societies officially opposed the appointment of Professor Wilbur Cohen as Assistant Secretary to HEW Cabinet member Ribicoff. Despite the delay of two months pending FBI clearance, Cohen was confirmed by a Senate vote of 5 to 3. Only eight senators out of 100 voted on the confirmation. Our Oklahoma Senators supported Cohen.

As to future policies of our Federal Legislative Committee, we make the recommendation that every member of the State Medical Association assume the responsibility of becoming well informed on current national and international events and take a position of positive leadership in as many local community activities as possible. Socialized medicine is only a small facet of the total threat of creeping socialism in the United States and throughout the world. We have gone nearly half the way and have been promised that we will "fall like overripe fruit" into the waiting arms of the USSR.

In brief, our recommendations are, **Improve and Educate Self**—assume responsibilities of leadership in our community—especially in precincts and wards but also in churches, schools and civic organizations. Plans are underway to create an association Speaker's Bureau. Also, the Federal Legislative Committee will accelerate its activities to keep the profession abreast of the legislative picture, through the medium of newsletters.

SECTION III

As all of you know, the Constitution and By-Laws of the Oklahoma State Medical Association creates the Grievance Committee to be made up of the immediate five past presidents living in the State of Oklahoma.

The Grievance Committee has met on the second Sunday of each month with the exception of the summer months, and with one exception when the complaints before the Committee did not warrant a meeting.

During the year 1960-61 your committee considered thirty-one cases of which twenty-five have been closed and, of course, six are current.

Of the cases considered by the committee, they fall into three main categories: fees, lack of medical attention, and civic criticism of local hospital and medical care.

While the committee would be presumptuous to assume it had settled all cases to the satisfaction of all concerned, it would nevertheless make the comment that in its opinion the spirit of cooperation on the part of both parties in a complaint has been to try to develop a better understanding between the Medical Profession and the Public.

Your committee will continue its efforts to bridge this gap.

COUNCIL ON INSURANCE

Bruce R. Hinson, M.D., Chairman

The Council on Insurance is comprised of the following committees:

Professional Liability: Doctor Ralph A. Smith, Oklahoma City, Chairman (Section I).

Group Insurance: Doctor E. C. Yeary, Ponca City, Chairman (Section II).

SECTION I

In your folder you can review the report of the Professional Liability Committee. It is obvious from this report that the committee has exercised its duties as it pertains to professional liability cases brought against physicians and will continue to do so.

SECTION II

The report from the Group Insurance Committee also speaks for itself. The group life insurance program is currently in the black and the accident and health program is in a transition period wherein your Council feels, as the reports indicate, the members are now insured with a company wherein subsequent liabilities can be taken care of with no question or doubt.

COUNCIL ON PROFESSIONAL EDUCATION

R. R. Hannas, Jr., M.D., Chairman

The Council on Professional Education is comprised of the following Committees:

Postgraduate Education: Doctor R. R. Hannas, Jr., Sentinel, Chairman (Section I).

Medical School Liaison: Doctor Gregory E. Stanbro, Oklahoma City, Chairman (Section II).

AMEF: Doctor John M. Taylor, Kingfisher, Chairman (Section III).

SECTION I

The Postgraduate Education Committee has, in conjunction with the University of Oklahoma School of Medicine, sponsored three Regional Postgraduate Courses (held at Ponca City, Lawton, and Muskogee), all well attended; a Roundtable Postgraduate Course at the Oklahoma University Medical Center on Problems in General Practice; and it has begun work on a series of postgraduate television programs for future use and reception in our homes. The Committee has also worked out plans for a Loan, Grant-in-Aid, and Scholarship Fund for the University of Oklahoma medical students to encourage an increase in both the number and quality of medical students.

Recommendations

1. That the Regional Postgraduate Courses started this year be continued next year on a monthly basis from September through April, and that $1,200 be allotted by the Oklahoma State Medical Association, to be used if needed, in support of this program.
2. That the Oklahoma State Medical Association agree to sponsor, in conjunction with the University of Oklahoma School of Medicine, a series of television programs utilizing the services of the Educational Television Service at the University of Oklahoma, with no funds to be appropriated by this Association for this purpose until such time as expenses may be accurately estimated and other means of financing explored.
3. That a loan, scholarship, and grant-in-aid fund

be established at the University of Oklahoma School of Medicine to be known as the Oklahoma State Medical Association Loan and Scholarship Fund; this fund to be provided by a State Association dues increase at $5.00 per year per member; $3.00 of which is to be used for the establishment of a Loan Fund, and $2.00 of which is to be used for scholarships and grants-in-aid; and that such monies appropriated by the OSMA for this purpose shall be available for distribution by the University of Oklahoma School of Medicine with the advice and counsel of the immediate past-president of this Association, and that if the House of Delegates of the OSMA votes this increase in dues of $5.00, it shall be set aside in a special fund for the purposes described above. Repayment of monies loaned by this fund shall begin within five (5) years of graduation from medical school, shall be repaid within three (3) years of the beginning of repayment and shall bear three per cent (3%) interest annually, beginning one year after the borrower graduates from medical school. All loans, scholarships, and grants-in-aid awarded under this program shall be reviewed each year by the Postgraduate Education Committee of the OSMA and a report shall be made to the Council and House of Delegates, and this program shall be re-evaluated at the end of five years and such changes recommended as are deemed necessary.

SECTION II

The Medical School Liaison Committee has developed a plan utilizing the members of this Association and the Oklahoma University School of Medicine staff to inform and encourage prospective premedical students to follow careers in medicine and particularly to attend our State Medical School.

Recommendations

1. That each councilor shall appoint, within his district, a team or teams of physicians, who shall be available to discuss with interested highschool students the basic requirements for medical school admission. The President or Executive Secretary of the Oklahoma State Medical Association shall notify the principal of each highschool that such groups exist, urge their use, and inform these principals who such physicians are in their respective area. In order that the material presented shall have uniformity and be factual, the Liaison Committee shall prepare a brochure listing requirements for entrance to a medical school. This brochure shall also contain tuition costs for medical schools in and adjacent to the State of Oklahoma. While it is recognized that some students, because of family ties or religious affiliation, may not choose to enter the University of Oklahoma School of Medicine, it is hoped that the several advisory teams will urge these young people to consider the University of Oklahoma as their school of choice.

2. The Dean of the University of Oklahoma School of Medicine shall be requested to inform the Liaison Committee of the State Medical Association, of the various steps that he considers most effective for raising the level of interest among college students in our various four-year colleges, concerning a career in medicine. The Oklahoma State Medical Association shall pledge its assistance in carrying out such a program, giving aid through its administrative offices, local societies or committees that may be peculiarly adapted to this endeavor.

3. It is further recommended that in order to insure continuity of this program, the Medical School Liaison Committee be pemanently constituted and that the function of Medical Education Encouragement be assigned to this committee.

SECTION III

A new committee has been appointed to supervise American Medical Education Foundation activities. With the aid of loyal individuals in our Association and in the Woman's Auxiliary, the AMEF donations continue to increase, though at a slow rate.

COUNCIL ON SOCIO-ECONOMIC ACTIVITIES

Mark R. Johnson, M.D., Chairman

The Council on Socio-Economic Activities is comprised of the following Committees:

Public Welfare: Doctor Alfred T. Baker, Durant, Chairman (Section I).

Labor and Miscellaneous Third Party Programs: Doctor Joe L. Duer, Woodward, Chairman (Section III).

Industrial Health: Doctor Charles M. O'Leary, Oklahoma City, Chairman (Section III).

Prepaid Medical Care: Doctor Frank J. Nelson, Tulsa, Chairman (Section IV).

SECTION I

The report period began with a financial crisis for the welfare medical care program. It ends with plans for relatively broad extensions and the expenditure of even greater funds. Steps are being taken to tailor the program along the lines of the Kerr-Mills bill which has received the support of the State Association. A debate rages between the Oklahoma State Hospital Association and the Department of Public Welfare as the former group pushes its campaign to obtain full per diem reimbursement and the right to bill directly all welfare patients who have utilized hospital facilities. Official audits and restrictive legislation are being called for. Classification of nursing homes has been accomplished and has paved the way for pro-rated reimbursement for such care. Funds have been made available to provide some remuneration for physicians' services rendered in nursing homes. A proposal that the program provide monies for the purchase of certain drugs has been heard. A growing number of physicians are asking reimbursement for the care of children. As the resources and limits of the program are being expanded a most vital and pertinent question remains unanswered: How many people need how much care?

The recommendations of the committee are as follows:

1. That the welfare medical care program supported by the members of the Oklahoma State Medical Association be tailored to conform to the principal pattern of the Kerr-Mills bill; that it be designed to meet the

true needs of the indigent sick and that it do nothing to create need through the provision of services; that monetary assistance from tax funds be acknowledged as an ultimate and not a primary resource; that the customary patient-physician relationships remain unaltered.

2. That the State Medical Association inform the Oklahoma State Hospital Association that it feels family, and community responsibilities should be nurtured and preserved and that it cannot therefore support the Hospital Association's demand for full cost reimbursement through tax sources.

3. That in the eventuality the medical care program is broadened to include the purchase of drugs, such provision be limited to prescription items as defined by state and federal laws, specifically to exclude all items which could be purchased without prescriptions.

4. That professional medical representation be offered and solicited in the maintenance, supervision and development of all phases of the medical care program.

5. That further consideration be given to the endorsement of payment for physicians services in the care of children.

SECTION II

In spite of some study devoted to the problem, the Committee on Labor and Miscellaneous Third Party Programs does not feel sufficiently informed or experienced to recommend a definite protocol for the establishment of such a relationship. A vast amount of effort has been expended by interested groups at the national level, but as yet no generally acceptable plan has been presented.

The recommendation is, therefore, that the committee continue to study and evaluate all proposals which may be presented by recognized professional groups, local and national.

SECTION III

In an effort to support and expedite the development of effective industrial health programs, your Committee on Industrial Health recommends that pilot surveys be conducted in Oklahoma and Tulsa Counties in which physicians in these areas will be asked to complete questionnaires regarding their willingness and qualifications for participating in industrial health work.

If successful, such techniques will be employed in other counties and will eventually lead to a records system at the state level. By using such information, it is believed that effective industrial health programs can be developed which will not broach medical ethics and will serve the best interests of physicians and industry.

SECTION IV

Recommendations from the Prepaid Medical Care Committee are as follows:

1. That the California Relative Value Schedule be adopted as a basis upon which to structure the Blue Shield allowances (anesthesia on a time basis). Changes may be made at the suggestion of specialty organizations or members-at-large.

2. That unit values of $3.00, $3.50, and $4.00, respectively, be applied to the California schedule, thereby creating three acts of Blue Shield allowances.

3. That Blue Shield implement these schedules in accordance with its best judgment; but it is also recommended that the scope of the benefits offered should be directly related to the cost of the medical practice in the various economic areas of the state, to the extent that an individual may insure himself against approximately 80-85% of the cost of professional services in his community.

4. That Blue Shield determine the economic areas of the state on the basis of its records which indicate average billed charges.

5. That this program be placed into effect by Blue Shield as soon as possible; and it is requested that the final plan approved by the Blue Shield Board be presented to the review of the OSMA Committee.

6. That the fee schedules not be printed, but that information regarding the basis of determination, including the relationships of the three sets of allowances to the average charges in each economic area, be made available to necessarily interested parties.

7. That the President of the OSMA request the House of Delegates to clarify the question: "Are service contracts by counties or income bracket in accord with the policy of the State Medical Association?"

8. That other insurance carriers be urged to make use of the California Relative Value Schedule.

This report and these recommendations are respectively submitted for your information and action.

NECROLOGY REPORT

Charles Jerome Alexander, M.D.	Clinton
Roscoe C. Baker, M.D.	Enid
Loren Guy Blackmer, M.D.	Hooker
Claude Starr Chambers, M.D.	Seminole
William Charles Cole, M.D.	Lawton
William Albert Cook, M.D.	Tulsa
Emory Speer Crow, M.D.	Olustee
John Lewis Day, M.D.	Woodward
Albert Nila Earnest, M.D.	Muskogee
Herman Otis Gowey, M.D.	Newkirk
Elizabeth Ann Grantham, M.D.	Seattle, Wash.
John Evans Heatley, M.D.	Oklahoma City
Finis W. Henderson, M.D.	Fort Worth Texas
Allen Clarence Kramer, M.D.	Tulsa
John Henderson Lamb, M.D.	Oklahoma City
Wilson Hewett Lane, M.D.	Oklahoma City
Robert Kerr McIntosh, Jr., M.D.	Tahlequah
Charles F. Moore, M.D.	Durant
Paul Mote, M.D.	Fairhope, Alabama
Waldo Bee Newell, Sr., M.D.	Enid
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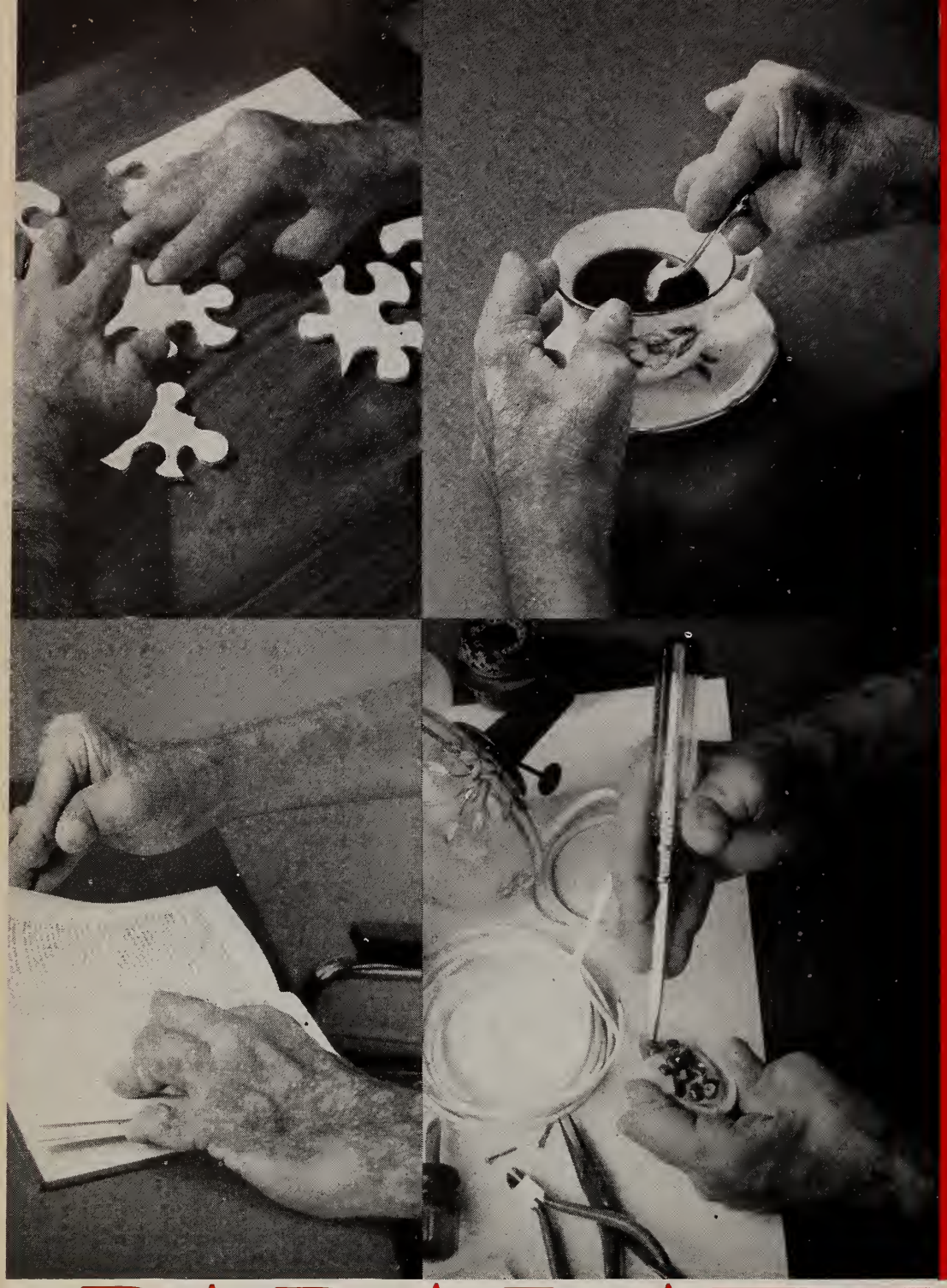
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Editorials

Federal Regulation of Animal Experimentation

Two proposals to regulate animal experimentation are before Congress; one by Representative Martha Griffiths of Michigan (HR 1937) and the other by Representative Morgan Moulder of Missouri (HR 3556). They are being considered by the Committee on Interstate and Foreign Commerce—House of Representatives of which Oklahoma's John Jarman is a member.

H.R. 3556—A Bill

To provide for humane treatment of animals used in experiment and research by recipients of grants from the United States, and by agencies and instrumentalities of the United States, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is declared to be the policy of the United States that animals used in experiments, tests, the teaching of scientific methods and techniques, and the production of medical and pharmaceutical materials, shall be spared avoidable pain, stress, discomfort and fear, that they shall be used only when no other feasible and satisfactory method can be used to obtain necessary scientific information for the cure of disease, alleviation of suffering, prolongation of life, or for military requirements, that the number of animals used for these purposes shall be reduced as far as possible, and that all animals so used shall be comfortably housed, well fed, and humanely treated.

SEC. 6. From and after January 1, 1962, no grant of money for research, experimentation, testing, or training in scientifc procedures or techniques, or the production of medical or pharmaceutical material, and no advance or payment under any such grant, shall be made by or through any agency or instrumentality of the United States, or by or through any person or agency pursuant to contract or authorization of the United States Government, to any laboratory or person using animals in research, experiments, tests, or training in scientific procedures and techniques, unless the laboratory or person applying for or receiving the grant has a certificate of compliance with this Act, issued by the Commissioner for Laboratory Animal Control.

This statement of purpose of the bill is a formidable bit of serious tom-foolishness. It is formidable because of the proposed set-up for Federal control. It is serious because the author is serious and means every word of it. It is a bit of Congressional tom-foolishness because it is taking advantage of the presumably nicer conscience and greater humanitarianism of the legislator to legislate the same for the scentist. How naive can one be? Without them, no legislation can produce them or replace them with controls and with them no legislation is necessary. The entire education and training of the scientist in America should develop in him a type of humility that spawns abhorence of cruelty and waste.

It probably would make no sense to the advocates of such legislation to inform them that the scientist would not accept as valid data obtained from experimental animals who were malnourished, filthy, sick, poorly housed and generally poorly cared for. This is just a little added protection for the animal in case the scientist is lacking the humility of the lawmaker. But I have never seen either an investigator or his technical helpers in an experimental laboratory be deliberately cruel in the handling or treatment of animals.

One little item in the bill that is worthy of note. The control is to be money, Federal money. You play ball with us and do as we say or no grants of money. Where does most of the grant money come from? From the National Institutes of Health. Who says the Federal Government can't control what it puts money into? This is an open declaration of intent by the author of the bill to see to it that the Federal Government does control not by law but by money.

Remember—John Jarman is our representative on the Committee.

New Medical Examiner's Law

The legislature has finally taken the investigation of unexplained deaths in the state of Oklahoma out of the horse and buggy days with the passage of Senate Bill No. 81. The bill, written by Senator Charles Wilson of Sayre and actively supported by the Oklahoma State Medical Association and various law enforcement groups, provides for the establishment of a medical examiner's system. The old law, copied after a North Dakota statute and in effect since 1907, provided only two legal methods of obtaining permission for autopsies. The most frequent approach was to try to obtain specific permission from the nearest of kin. Upon the refusal of the nearest of kin, permission could then only be obtained through a coroners (justice of the peace) court. In cases of suspected homicide, neither method was satisfactory.

Senate Bill 81 establishes a board for unexplained deaths with powers to hire a State Medical Examiner. The State Medical Examiner must be a doctor of medicine with special training in pathology. He is empowered to appoint County Medical Examiners who will investigate unexplained and suspicious deaths at the request of local law enforcement officers. The County Medical Examiner will then make recommendations as to whether or not an autopsy is indicated in such cases. In event an autopsy seems indicated, permission will be obtained in the following fashion:

A. From the deceased during his lifetime, or

B. From the surviving spouse of the deceased, or

C. If the surviving spouse is incompetent or not within the county or adjoining county, or if there is no surviving spouse, then from an adult child, parent, brother or sister of the deceased, or

D. If the deceased has no known spouse, adult child, parent, brother or sister within the state, then from the County Attorney.

If the consent in writing is refused, or cannot be obtained within a reasonable time, the County Medical Examiner or his designated deputy or the County Attorney where the death occurred may make application in writing to the District Court. In the absence of the district judge from the county or his unavailability, the County Court shall forthwith consider the application and issue its order for an autopsy or denial of the application, which decision of the court shall be final.

Until such time as the legislature shall make appropriations available, the State Medical Examiner and any depute state medical examiner shall be appointed from qualified instructors or other personnel from the School of Medicine at the University of Oklahoma, and their compensation and expenses shall be provided from the appropriations made available to the Medical School. The present legislature provided no funds for the implementation of this bill.

The bill was amended in the House and the amendment subsequently approved by the Senate to the effect that any information obtained through such investigation as described under the bill cannot be used in civil cases.

People of the state of Oklahoma should be grateful to Senator Wilson and other enlightened legislators who worked very diligently for the passage of this act.—*H.T.R.*

C. B. Dawson Joins Editorial Board

C. B. Dawson, M.D., Oklahoma City urologist, was recently appointed to the Board of Editors of the *Journal* of the OSMA.

After receiving his Bachelor of Science degree from Oklahoma State University in Stillwater, Doctor Dawson graduated from the University of Oklahoma School of Medicine where he is now Associate Professor of Urology. His internship at Augustana Hospital in Chicago was followed by two-years active duty with the U.S. Navy in the Pacific.

Subsequent to his release from active duty, he served a residency in urology at the University Hospitals in Oklahoma City.

He is a Diplomate of the American Board of Urology and a Fellow of the American College of Surgeons.

Doctor Dawson is Editor of the *Bulletin* of the Oklahoma County Medical Society, a member of the American Urological Association and the South Central Section of the American Urological Association.

PRESIDENT'S LETTER



A visit to the AMA's House of Delegates meeting is a rewarding experience. It's gratifying to witness the sincerity of the physicians who comprise this policy-making body, as they labor endless hours over the myriad of complex problems confronting them.

Our own delegation is exemplary; worthy of our appreciation and support!

Delegates Hoover and Phelps bore the brunt of the work, receiving able assistance from Alternates Duer and Points. Other assists were provided by President-Elect Carlock, OSMA Vice-Speaker Hodgson, Doctor John F. Burton, a member of the AMA's Council on Medical Service and Doctor Wendell L. Smith, President of the Tulsa County Medical Society.

Two of the above were singularly honored during the meeting. Doctor Burton was named Chairman of the Council on Medical Service, automatically making him a member of the House of Delegates, and Doctor Phelps was elected President of the Aces and Deuces, a fraternal organization of states with one or two delegates.

Oklahoma's voice in the AMA grows continually stronger—through the efforts of the present delegation to continue the dedicated pattern of those who went before.

Our thin ranks do not permit us to thoroughly cover the many Reference Committee activities, however, and volunteers for this interesting task would be most heartily welcomed.

* * * * *

By the time you read this, H.R. 4222 may have been passed or (we hope) postponed. Please remember it is not likely to be abandoned.

Only through concerted and continuing action may we hope to forestall a dangerous precedent in the provision of health care.

Clinton Gallaher M. D.
President

Scientific Articles

Preliminary Report on Trial of *l*-Alpha-Methyl Dopa (Aldomet®) in the Treatment of Hypertension*

R. W. PAYNE, M.D. J. H. CLOSE***
T. L. WHITSETT*** J. G. GOGERTY, Ph.D.

ALPHA-METHYL DOPA, an analogue of 3,4-dihydroxyphenylalanine (DOPA), has been shown to inhibit the decarboxylation of DOPA and 5-hydroxytryptophane, with resultant depression of the formation of norepinephrine and 5-hydroxytryptamine (serotonin).[1,2] An antihypertensive effect of the d,l mixture of this agent has been described in man by Oates, Gillespie, Udenfriend and Sjoerdsma.[3,4]

While the clinical effectiveness of alpha-methyl dopa in the treatment of hypertension has not been specifically demonstrated to result from inhibition of pressor amine formation, such serves as the most attractive explanation of its antihypertensive action. The present report is concerned with the clinical response to the levorotatory form of alpha-methyl dopa (Aldomet®)** (figure 1) in the treatment of hypertension.

Methods

Patients with hypertension classified as malignant or essential were studied at the Oklahoma County Farm Hospital and the out-patient clinic of the University Hospital. After stabilization of blood pressure without antihypertensive medication, *l*-alpha-methyl dopa was administered in divided daily doses. Blood pressure and pulse were recorded in the standing, sitting and supine positions at frequent intervals during the day until consistent readings were obtained; then daily recordings were taken 3½-4 hours after the noon dose of the drug. For purposes of the present report average sitting blood pressure determinations at the beginning of treatment are compared with those obtained after six weeks of therapy.

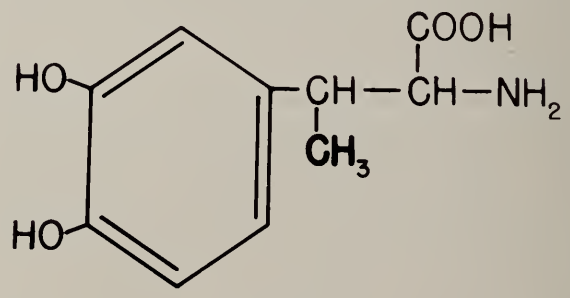


Figure 1

*From the Departments of Pharmacology and Medicine, University of Oklahoma School of Medicine.
**Supplied by Doctor Edmund DeMaar, Merck Sharp & Dohme Research Laboratories, West Point, Pennsylvania.
***Senior Medical Student.

Pt.	Age/Sex/Race	Av. Initial B.P. (Sitting)	Final Daily Dose Aldomet (Gm.)	Duration Rx	Av. Stabilized B.P. (Sitting)	Comments
H.G.	52/M/W	170/112	1.0	4 months	130/90	
M.R.	40/F/W	178/110	0.75	3 months	126/84	
W.E.	46/F/W	240/170	1.0	3 months	150/100	
H.B.	48/M/W	220/140	1.5*	4 months	130/80	
J.O.	40/M/W	180/120	1.0	4 months	140/90	
S.B.	63/F/W	190/115	1.0	5 months	120/70	
C.J.	31/M/W	200/120	1.5*	5 months	132/90	
W.W.	70/M/W	218/140	2.5*	5 months	130/90	Malignant Hypertension.
R.H.	69/M/W	218/140	0.75	5 months	120/70	
A.W.	61/F/W	186/110	1.75*	5 months	108/62	Malignant Hypertension.
M.B.	73/F/W	258/128	0.75*	5 months	140/86	Malignant Hypertension.
B.D.	47/M/W	230/126	1.5	3 months	150/90	
M.C.	37/F/N	250/170	2.0	4 months	110/84	
E.W.	46/F/N	210/120	1.5	2 months	160/98	

* + Chlorothiazide, 250 mg., B.I.D.

TABLE 1
Response of Individual Hypertensives to L-Alpha-Methyl Dopa

Results

Fourteen hypertensive patients treated with *l*-alpha-methyl dopa are included in the present study, six of whom have received the drug for periods of five months. Satisfactory lowering of blood pressure has been maintained in all patients using total daily doses of 0.75 to 2.5 gm (table 1). All patients initially responded to 0.25 gm. of *l*-alpha-methyl dopa every six hours, though inadequate control became apparent at this dose level in six of the subjects during the first few weeks of treatment. Stabilization of blood pressure at a desirable level occurred in all subjects upon increasing dosage of the medication. Though total dosage of *l*-alpha-methyl dopa appeared of greatest importance in maintaining satisfactory lowering of blood pressure, manipulation of individual doses was occasionally advantageous in providing more consistent control of hourly blood pressure fluctuations. On a Q.I.D. schedule the range of total daily dosage required in the patients was as follows:

Total Daily Dose (gm.)	0.75	1.0	1.5	1.75	2.0	2.5
Number of Patients	2	6	2	1	2	1

Dosage schedules other than Q.I.D. are presently under study.

While all patients under treatment exhibited greater lowering of blood pressure in the standing than in the recumbent position, only two complained of symptomatic orthostatic hypotension which in both cases appeared upon arising in the morning. This discomfort was readily removed by readjustment of dosage schedule to eliminate the midnight dose. Reduction of dosage below 0.75 gm. daily or a division of dosage into a B.I.D. schedule did not maintain an adequate hypotensive effect in any of the patients.

The maximum antihypertensive effect appeared after 1-2 days of treatment. Slight bradycardia was attributed to the medication in five of the patients. When the drug was discontinued, its effects were dissipated

in 48 hours with return of blood pressure to control levels without overshoot. The patients appeared particularly cheerful and symptomatically improved.

Reduction of the total dosage was made possible in five patients by the addition of chlorothiazide 250 mg. B.I.D. to their regimen. After the first month of treatment, stable dosage levels of *l*-alpha-methyl dopa + chlorothiazide were established affording blood pressure readings consistently within acceptable limits.

Side effects to *l*-alpha-methyl dopa have not been serious (table 2.) Initial sedation occurred in five of the patients but disappeared within 48 hours. No evidence of mental depression has been observed. Mild xerostoma persisted in three subjects. Diarrhea occurred in four patients 1-4 months after beginning treatment and was controlled by reduction of dosage or treatment with an anticholinergic agent (Probanthine®, 15 mg. Q 6 hrs.). It was our impression that these patients exhibited gastroenteritis not caused by but intensified by the drug, demonstrated by the fact that as the diarrhea subsided original dosage was again well tolerated. No hepatotoxic effect of the agent has become evident and serum S-GOT and alkaline phosphatase titers have remained unchanged in all patients.

Initial Sleepiness	5*
Dry Mouth	3
Diarrhea	4
Orthostatic Hypotension	2

Side Effects to L-Alpha-Methyl Dopa
*Maximum Duration—48 hours
TABLE 2

Summary

The levorotatory isomer of alpha-methyl dopa exerts a consistent antihypertensive effect to which tolerance does not appear to develop. Blood pressure lowering effects of the agent are potentiated by chlorothiazide. Relative lack of serious side effects further recommends use of the agent.

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800 N.E. 13th, Oklahoma City, Oklahoma

Postpayment Plan Launched in Tulsa

The Tulsa County Medical Society recently announced its sponsorship of an unique program for budgeting the costs of medical care. Through a cooperative arrangement between the society and Tulsa's First National Bank, Tulsa citizens with good credit ratings will now be able to borrow money on an unsecured note to pay for medical, surgical and obstetrical care.

A reserve fund to guarantee defaulted notes was raised by voluntary contributions of $20 each from participating Tulsa physicians. Regardless of whether they contributed to the reserve fund, all Tulsa physicians are eligible to participate, securing their contracts through the medical society office.

The "MD Plan," as it is called, enables patients to budget medical bills after the debt is incurred, thus offering relief to those who do not possess adequate prepayment insurance or are otherwise unable to meet financial obligations. Such loans carry an annual interest rate of 7%. Physicians receive 95% of their total charges, with the remaining 5% being plowed back into the reserve fund for defaulted notes.

The painful shoulder, like a pain in the neck, can propagate into a major disability unless effective and comprehensive physical medicine and rehabilitation therapy is prescribed.

Physical Medicine and Rehabilitation of the Painful Shoulder*

HERBERT KENT, M.D.

A graduate of the Royal College of Physicians and Surgeons, Herbert Kent, M.D., has been certified by the American Board of Physical Medicine and Rehabilitation. In addition to his private practice in Oklahoma City, he is Associate Professor of the Department of Physical Medicine and the Department of Preventive Medicine and Public Health at the University of Oklahoma School of Medicine.

Doctor Kent holds memberships in the American Congress of Preventive Medicine and Rehabilitation, the American Academy of Preventive Medicine and Rehabilitation, the British Medical Association and the President's Committee on Employment of the Physically Handicapped.

PAINFUL scapulo-humeral motion, if left untreated, can lead to a stiff shoulder—better described as a "frozen shoulder." More thought should be given to this condition for functional everyday considerations and the necessity for early recognition and prompt treatment if we are to avoid the sequelae of this disability.

Should this problem persist for an extended period, mechanisms are set up which may lead to a syndrome of events not only involving the shoulder but even the forearm and hand as well. Such neuralgic amyotrophy has been documented in extensive detail by Steinbrocker et al,[1] as the Shoulder-Hand Syndrome.

Remarkably little was published about non-specific painful shoulder joints until 1934, when Codman[2] drew strong attention to the importance of the conjoined tendon and its relationship to degenerative changes in the supraspinatus tendon itself. Since then our knowledge of the subject has improved anatomically, but treatment is still far from satisfactory.[3,4]

Diagnosis

Pain in the shoulder may result from definitive pathology: dislocations, tuberculosis, tumors, arthritis, etc. In addition, referred disturbances from the heart, lungs, gallbladder, etc., also may produce shoulder discomfort. However, there is a rather large, well-defined group in which there is shoulder pain, impaired range of motion, frequently muscle weakness, and diminution of function where radiographic evidence is not apparent. It is this syndrome group which we are concerned with at this time.

The causes of shoulder pain in this latter group generally lie in the anatomic structures involved. Diagnosis must precede treatment. A careful history, physical examination, and roentgenogram are essential. In addition, recording of joint range, muscle strength and functional activities must be made particularly to assess disability and improvement following treatment.

*Presented at the 55th Annual Meeting of the Oklahoma State Medical Association, May 7-9, 1961.

Anatomy and Kinesiology

The shoulder joint is the most mobile joint in the body. This freedom of movement is given by the relatively large head of the humerus and shallow glenoid cavity. The mobility is provided at the expense of stability. While, at first thought, one can doubt the security of this articulation, it should be remembered that powerful muscles, strong ligaments and a loose capsule give this joint unusual strength. This can be visualized by observing a pitcher in a baseball game and the tremendous forces involved in securing the joint when the baseball is thrown. These anatomical considerations are important in the evaluation and treatment of the painful shoulder.

There is a loose ligamentous capsule enveloping the shoulder joint which is supported by muscles whose tendons lie in close proximity with it. If we consider these intimately connected structures, traumatic or inflammatory processes are frequently difficult to delineate except for the gross manifestation of pain, and subsequent restriction of joint range. Above the capsule is the supraspinatus and biceps tendon, subdeltoid, and subacromial bursae; behind, the infraspinatus and teres minor. In front is the subscapularis. Below, where the capsule is to a certain extent unsupported by muscles, there is a prolongation downwards of a fold of the capsule when the limb is in the ordinary dependent position. This fold is obliterated when the arm is abducted. To a major extent, many cases of "painful shoulder" are due to fibrinous depositions and changes in this loose fold. Recently, these changes have been confirmed by improved techniques of arthrography.[5] The deposits are a common occurrence in paralytic shoulders of the hemiplegic patient. If allowed to progress, the arm abduction becomes more and more restricted and eventually develops into what is frequently described as the "frozen" shoulder.

The underlying pathology is initiated as an inflammatory process—capsulitis if you wish—in any of the structures mentioned and subsequent adherence of the synovia followed by a spread to periarticular tissues thus producing a varied type of pain. Restriction of shoulder motion occurs early and insidiously. Consequently, testing of the ranges of motion will in many cases produce diagnostic evidence of an early developing painful shoulder.

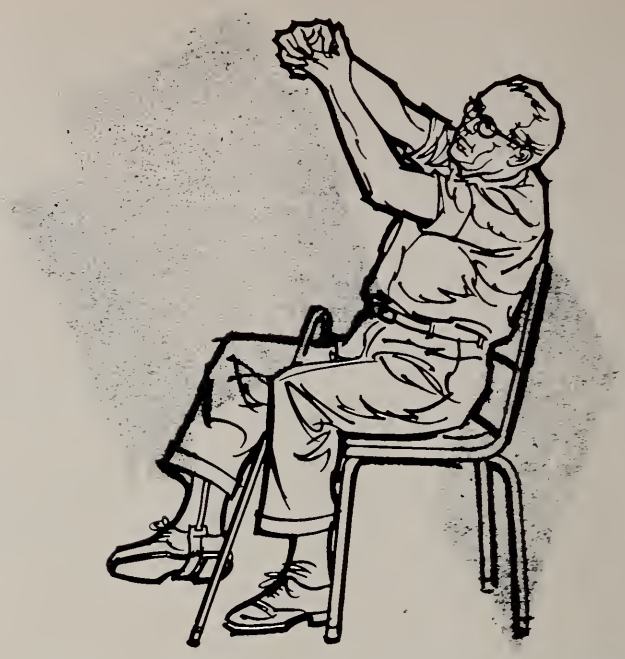


Figure 1. "Self-mobilization" of the Painful Shoulder.

Average normal joint ranges are as follows: (with the Anatomical Position considered as zero)

Extension	0- 45
Flexion	0-180
Abduction	0-180
Adduction	0
Internal Rotation	0- 90
External Rotation	0- 90

The muscles chiefly concerned in producing shoulder motion are:

Extension—latissimus dorsi, deltoid (posterior fibers), teres major

Flexion—pectoralis major, deltoid (anterior fibers)

Abduction—supraspinatus, deltoid

Adduction—pectoralis major, coracobrachialis, teres major, latissimus dorsi

Internal Rotation—subscapularis, pectoralis major, latissimus dorsi, teres major

External Rotation—infraspinatus, teres minor

Physical Medicine and Treatment

Conservative and simple measures, if employed early, can avoid the occurrence of a

"frozen" shoulder. Opinion is uniform, that putting the arm completely at rest is undesirable. However, most patients because of pain, gradually come to restrict their activity until joint range is markedly impaired. Therefore, a management program must encompass and control pain first and foremost.

Relief of Pain

Physical medicine has much to contribute to pain relief in the early stages of the disease. Hyperthermia, whether it be from radiation or inductive devices, ultrasound or the heating pad, has the basic physiologic asset of increasing skin or muscle vascularity. However, one must remember that the periarticular structures; capsule, tendon, etc., are relatively avascular. Consequently, a temperature gradient of 100-103° F. (37.7-39.4° C.) for an extended period is far superior to twenty minutes of "baking" 110-115° F. (43.3-46.2° C.). Most patients do well with the use of a heating pad on the lowest heat setting possible for several hours. "Hot packs" are most soothing and are ideal particularly when the patient is lying down. Short wave or micro-wave diathermy is especially indicated when heating is to be deep. Ultrasound has been useful in focal heating of tissue.

Hypothermia on the other hand, has particular merit in acute conditions especially when pain is extreme. Newer medical cooling devices are available just as for heat generation. One may now produce localized cold to the body. However, for home use packing with ice bags is much more cheaply accomplished although not as efficiently. Ethyl Chloride Topical spray is also a helpful means of skin cooling and reducing pain in a shoulder.

The empirical use of heat alone, although temporarily palliative, does not suffice in most cases. Mobilization of the joint is mandatory for recovery. Thermotherapy is simply a preliminary measure. It must be followed by a well prescribed therapeutic exercise program. Shortened muscle groups and spasm release should be assisted by heat to relax, and then moved passively. The simplest method to achieve this stretching can be termed "pulley therapy" for it not only elongates muscle and tendon but also improves joint range. It is important to realize that the pain is causing the loss of free movement and not the stiffness.

Improving Joint Range

Scapulo-humeral movement is essential for the rehabilitation of the painful shoulder. Two methods are to be recommended, one requires some equipment. Both methods depend upon the patient. Improving joint range cannot be expected by having another individual or therapist work *on* the patient. One can only work *with* the patient so that he understands what exercises are necessary and to be practiced many times a day.

The first method (figure 1) requires that he grasp the wrist of the affected arm with the fingers of the normal side. The forearm and arm are then raised in a forward plane upwards as far overhead as possible. The second method (figure 2) requires an overhead pully, sash rope and leather cuff or glove for the wrist and fingers.

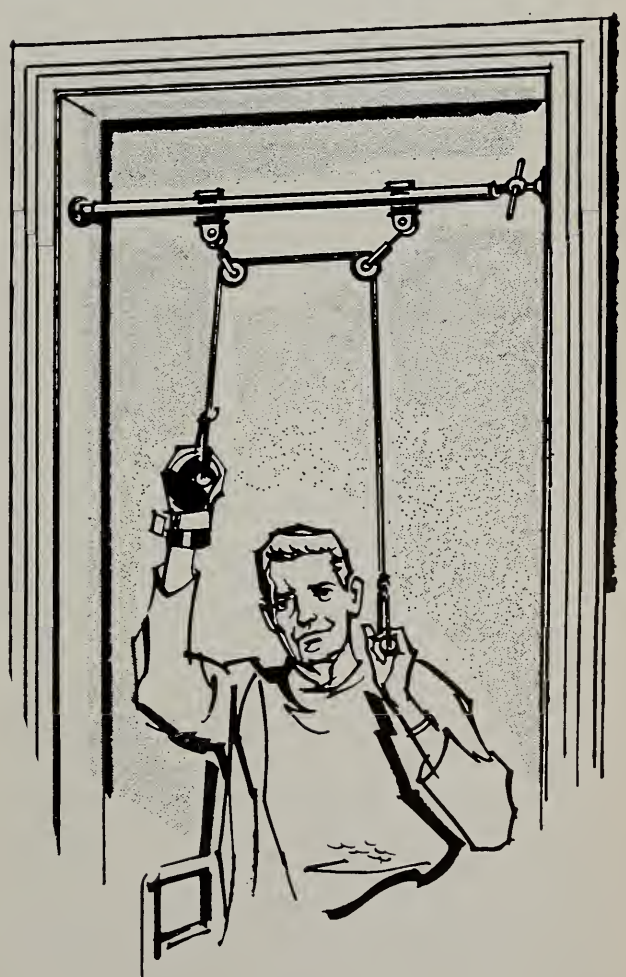


Figure 2. "Pulley-mobilization" of the Painful Shoulder.

The pulley, with a handle attached to one end of the rope, is arranged in such a fashion directly over the shoulder: to the ceiling, head of bed, doorway, so that movements of the affected arm and forearm are encouraged. If necessary, the paralyzed hand may be bandaged to the pulley rope with an Ace-bandage, special glove or leather strap. The exercise must be performed at least three times daily to alleviate shoulder joint discomfort and the prevention of a "frozen" shoulder.

Passive movements of the shoulder are useful in assisting joint range, but, the patient should be constantly urged to actively contract the shoulder musculature.

Improving Muscle Strength

Therapeutic exercises are instituted early while in bed, particularly following a "stroke." Generally, however, the chair position is best especially when a pulley and rope are employed.

Too often emphasis is placed on increasing motion in a weakened extremity with a limited range of motion, and very little or no thought to developing strength. The importance of completing joint range in all its aspects is to be emphasized. The painful shoulder atrophies insidiously through disuse. Sufficient strength can be restored in the shoulder muscles by using heavy resistance exercises. This is reflected in the load lifted and by girth measurements.

Muscle strength is attained through active or resistive exercises in which the patient performs work. The essence of such exercise is the expenditure of energy. Passive exercise, massage, or stretching will not improve motor power no matter how long this is performed.

Codman, who intensively studied this problem, suggested circumduction or "pendulum exercises," but they do not wholly suffice in many painful shoulders. A good starting position in the subacute case is to support the elbow on a table and then flex and extend the forearm through its entire range. If pain and discomfort do not occur, a pound weight is used. Gradually, over a period of days or weeks this is increased to 10 pounds. Other joint motions are then brought in: internal humeral motion and lastly external humeral rotation, the most difficult motion to rehabilitate. For the painless "frozen" shoulder, exercises should be more vigorous throughout the available joint range. A graduated therapeutic resistive exercise program is best instituted by a therapist trained in such procedures. Usually, four to six weeks are necessary to restore functional muscle strength in an affected limb.

The painful shoulder is notorious for its discouraging and sometimes prolonged response to conservative treatment. In the majority of cases, physical medicine and rehabilitation produces a more satisfactory recovery without surgical intervention.

When pain has been present for months or years, and radiates down the limb to the hand, stiffness and swelling of the hand may develop, often described as the "Shoulder-Hand Syndrome." Usually in these cases, stellate ganglion block combined with therapeutic exercises mitigates the pain and creates a more favorable and functioning shoulder.

Report of Illustrative Cases

Case 1.

A 45-year-old housewife was seen complaining of pain in the right shoulder. She stated that about six months ago she began to have rather persistent shoulder pain more noticeable at night. No history of injury or trauma could be elicited. Gradually, she found difficulty in combing her hair and fixing her bra. Her local physician recommended aspirin and local applications of heat which relieved temporarily. She noticed increasing stiffness in the shoulder and had to have assistance in putting on a coat. Finally, the pain became almost continuous.

Careful history taking failed to reveal a cause for the disability. Roentgenograms and other laboratory findings were negative for pathologic change. Examination disclosed some flattening of the shoulder contour and evidence of pain on active motion. Passive and active shoulder joint range was markedly restricted: abduction 45°; flexion 60°; extension 30°; internal humeral rotation 40°; external humeral rotation -5°.

Treatment consisted of ultrasound ther-

apy, codeine, "pulley therapy" and therapeutic exercises. Pain was brought under control within two weeks. Simple analgesics, mild heating before and following "pulley therapy" improved discomfort so that within four weeks a moderate therapeutic exercise program was underway. In two months, joint range improved. After four months, she could be discharged to a home program of therapeutic exercises to maintain joint mobility. Active joint range achieved: abduction 90°; flexion 90°; extension 45°; internal humeral rotation 60°; external humeral rotation 15°.

Case 2.

A male, aged 60, had sustained a left hemiplegia due to cerebral thrombosis. Three weeks later he commenced to have pain in the left shoulder. Because of bedrest and guarding he lost the ability to move his shoulder which became more painful.

On examination, attempted passive motion was accompanied by severe pain. Efforts to proceed with rehabilitation were resisted because of pain on body movements.

Treatment was initiated by short-wave diathermy and "pulley therapy" which he controlled himself. Gradually as pain was brought under control, joint range improved. After six weeks, thrice daily treatments, normal joint range was achieved. Exercises to improve muscle strength in the shoulder girdle musculature were begun. Within three months, he became ambulatory and was able to perform flexion movements of fingers. Pain in the shoulder had disappeared.

Comment

Disabling shoulder pain is well recognized to respond to many medicaments, anti-inflammatory agents, local anesthetics, x-ray, needling and various surgical procedures. Since statistics are unacceptable as to the preferred method of treatment, a plea is made for more conservative therapy. Physical remedies should be intelligently and comprehensively applied by physicians, particularly therapeutic exercises. More vigorous measures frequently encourages the prolongation of the inflammatory process and the symptoms persist for many months. Mobilization under anesthesia is to be deprecated. When pain has ceased, progressive mobilization will allow maximum shoulder recovery.

Summary

The painful shoulder not only is notorious for its delayed and apparent discouraging response to treatment, it can be generally stated that recovery is slow. However, if attention is paid to relief of pain, improvement of joint range and muscle strength, it will be found that equally as good results are possible when compared to other methods in management of the painful shoulder. Two case reports are presented illustrative of the results available through physical medicine and rehabilitation.

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Open Heart Surgery in A Private Hospital: Clinical Experience with 127 Cases*

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THE EXTENSION of open heart surgery beyond large medical centers has been limited in part by the absence of a simple, effective and inexpensive perfusion system. The technical problems of cardiac surgery are not in themselves prohibitive.[1] Over the past few years, we have developed a perfusion system which has provided a practicable and superior solution to the cardiopulmonary by-pass problem.

Method

The oxygenating perfusion apparatus consists of modifications of and additions to the basic bubble oxygenator of DeWall. Venous drainage is accomplished by catheters threaded into the venae cavae and gravity drainage is used for input of venous and cardiotomy suction return blood[2] into the vertical oxygenating tube (figure 1), and is mixed with 100% oxygen regulated at a flow that permits a slowly rising column of bubbles. The initial "debubbling" is done in a stainless steel canister filled with stainless steel mesh sprayed with Dow-Corning antifoam A. Incorporation of a filter into the oxygenator has decreased the post-helical volume by a least 130 cc. The blood enters the double helical system which acts as a reservoir, a buddle separator and heat exchanger.[3,4,5,6] The blood is then returned through a single pump head at a precalculated systemic perfusion flow. Cooling or warming of the blood is achieved by pumping cold or warm water countercurrently through the inner stainless steel helix.

The three basic features of our perfusion system are moderate internal hypothermia, low perfusion rate, and hemodilution.[1,12]

Internal Hypothermia

The advantages of internal hypothermia in extracorporeal circulation for cardiopul-

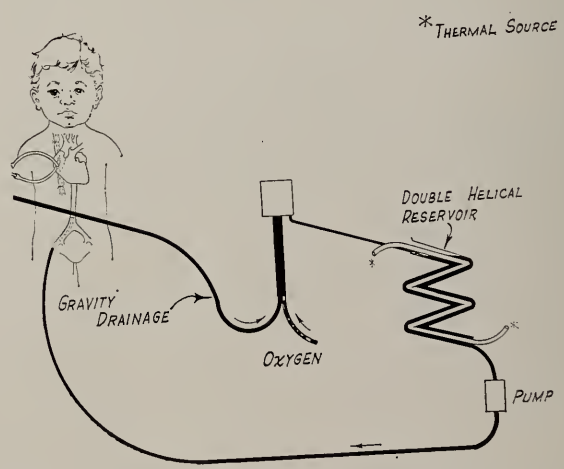


Figure 1. Open Heart Surgery—Schematic diagram showing simplified circuit and essentials of perfusion system.

*From the Cardiovascular Section, Mercy Hospital, Oklahoma City, Oklahoma.
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monary by-pass have been recorded by Gollan,[7] Sealy and co-workers,[8] and Zuhdi and associates.[9] Essentially, internal hypothermia permits a safe reduction of metabolic and oxygen requirements, unassociated with the limitations of external hypothermia or perfusion alone. The mid-intraesophageal temperature is decreased at a rate of 0.4C to 3C per minute to the desired level which varies at present between 25C to 30 C. The venae cavae are occluded for total cardiopulmonary by-pass just prior to aortic occlusion and reparative surgery. Simple aortic occlusion for periods of 15 to 25 minutes at a time during hypothermia allows an empty heart and helps prevent air embolism.[10] Rewarming takes somewhat longer, but this extra supportive partial by-pass is felt to be beneficial.

Low Flow Rates

A low flow rate of 20 cc per kg body weight per minute is used. The ratio of reservoir volume to flow per minute is 0.8. The clinical response and survival are at present the best criteria, though retrospective, for successful total body perfusion.[11] Through electroencephalographic data and oxygen saturation of the peripheral blood continuously monitored during the perfusion, and though studies on oxygen consumption, metabolic acidosis, and through other physiologic data we have concluded that 20 cc per kg body weight per minute maintains the vital functions at adequate levels. Immediate awakening and the clinical response indicate the safety of these low flow rates at an intraesophageal temperature of 25C to 30C.

Hemodilution

The simplification of the perfusion system and great reduction of extracorporeal volume predestined the introduction of the 5% dextrose in water for definitive priming of the extracorporeal circuit. After experimental analysis and evaluation, we have employed the dextrose in water primed machine in 83 patients. The extracorporeal priming volume is equal to the estimated eight hour fluid requirement of the patient, as determined by the formula $\frac{\text{wt in kg} \times 2 \times 24}{3}$.

EXPERIENCE WITH BLOOD PRIMED HEART-LUNG MACHINE

Defect	Cases	Mortality
I.A.D.	10	0
I.V.D.	11	1
P.S.	7	0
Tetralogy	7	2
M.S. & M.I.	5	0
Single Ventricle	1	1
Reverse P.D.A., V.S.D.	1	1
A.S., C.B.A.	2	0
	44	5

Table 1. Open Heart Surgery—Clinical experience with blood primed heart-lung machine.

The priming volume of 5% dextrose in water is pumped into the patient bringing about slight hemodilution.[12, 13] This fluid remains in circulation during the period of cardiopulmonary by-pass. Most of this hemodiluting solution disappears rapidly from the circulation during the first hour following perfusion. At the end of perfusion, contents of the system are pumped into the patient, restoring red cell mass. Replacement of the blood usually lost from the surgical field is done with banked citrated blood.[14]

Results

Until the time of this writing, we have used the double helical reservoir heart-lung machine in 127 patients undergoing open heart surgery. Forty-four of these in the early part of the experience were carried out with a blood primed extracorporeal circuit (table 1). We have used the dextrose in water primed machine in 83 patients, representing nearly the complete range of surgically correctable acquired and congenital cardiac defects (table 2). There was an equal number of adults (64) and children (63). Among the children, there were 17 infants aged three or under who had open heart surgery. While most of the adults had acquired disease, 26 were operated upon for congenital defects. Age bore no relationship to operative problems, or to postoperative morbidity or mortality. There were 35 consecutive survivals.

The adequacy of our perfusion system has been demonstrated, even when dealing with the lengthy repair of complicated defects.

EXPERIENCE WITH 5% D/W PRIMED HEART-LUNG MACHINE

Defect	Cases	Mortality
Mitral Stenosis	27	1
I.A.D.	14	0
I.V.D.	18	2
A.S. & S.A.S. (congenital)	7	0
P.S.	6	0
Mitral Insufficiency	3	2
A.S. (acquired)	3	3
A.V. Communis	1	1
Complete Transposition	1	1
Total Anom. P. Drain	1	0
Myocarditis	1	1
T.O.F. with shunt	1	1
	83	12

Table 2. Open Heart Surgery—Clinical experience with 5% dextrose in water primed heart-lung machine.

There have been no "perfusion deaths." There has been no evidence of bleeding or other hemorrhagic tendency.[1] There is adequate peripheral oxygenation and active electroencephalogram and urinary output during hypothermic total body cardiopulmonary by-pass. The immediate clinical response has been prompt and gratifying.

Consistent results are obtained. There have been no deaths in the group with atrial septal or uncomplicated ventricular septal defects, pulmonary stenosis, or congenital aortic stenosis. Morbidity and mortality appeared in the most severe acquired mitral and aortic valvular lesions or in the severe, virtually hopeless congenital cardiac problems.

Summary

The use of a simple small volume oxygenator at low flow rates, combining internal hypothermia and priming 5% dextrose in water most nearly meets the requirements of an ideal oxygenator. The details of this system and clinical results are described. Open heart surgery is brought within the scope of most community hospitals.

Addendum

Since the submission of this paper, an additional 17 patients have been operated on using the dextrose in water primed machine. This makes a total of 110 patients on whom this method has been employed.

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Though fat has long been used in the treatment of peptic ulcer, an understanding of the physiological basis for its use has not been taken into account. The long continued use of animal fats may produce coronary artery disease as manifested by clinical evidence.

Physiology of Fat-Anti-Acid Therapy For Peptic Ulcer*

VIRGIL RAY FORESTER, M.D.

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THE TREATMENT of peptic ulceration, either in the stomach or in the duodenum, is to alter the chemistry of the acid-pepsin activity.

Though we know little or nothing as to the etiology of peptic ulceration, we do know that it will not develop in the absence of hydrochloric acid.

Pepsin, which as the title of the disease indicates, is the promoter of ulceration. It is the why, that disturbs us.

Pepsin can be inactivated if the pH of the stomach contents is reduced to 3.5 and is destroyed at a pH of 7.

To produce such an alteration, we must use some form of medication which will neutralize the acid and pepsin within the stomach. To do this, we direct our attention to other factors than the merely giving of an anti-acid substance which will reduce the gastric pH for short periods of time. Our treatment is basically the stimulation of hormones which will in turn inhibit the formation of acid and pepsin.

In reality, this is not a new idea. As far back as the first century A.D., men of medicine had some idea about the use of foods and anti-acids to relieve discomfort in the stomach. Christopher R. Pemberton[1] in the 19th century treated with anti-acids though he did not know about peptic ulcer.

The most scientific advancement came with Sippy[2] in 1912, when he introduced the Sippy diet. This treatment is familiar to you all; the liberal use of milk, cream, and at first, sodium-bicarbonate. It has been changed some of late, the sodium bicarbonate has been eliminated.

This approach to the treatment of peptic ulcer has become so ingrained in the thinking of physicians that, in its modified form, has become a standard procedure.

Now, there is every reason to believe that the Sippy program is of value only in principle. We know that without question it is unnecessary to place these patients on a severely altered diet. In fact, patients using an almost normal diet have shown a slight, though statistically insignificant, higher rate of healing.[3]

We know that it is not so much what foods are eaten, but how they are eaten that is important. For example, food entering the stomach and passing into the antrum stimulates the mucosa in that area to secrete a hormone called Gastrin.[4] Gastrin, being a hormone, is carried in the blood to its localé of function. This is the parietal cells, and it increases their output of hydrochloric acid. If, however, we allow the intake of food only

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in frequent small feedings, we can lessen the production of gastrin. Not only do we lessen the production of gastrin, but we produce a sponge which will absorb the acid that is formed.

Since the earliest studies of Pavlov, it has been known that the ingestion of fat inhibits the secretion of gastric juice, and slows gastric motility. Any fat will do this.

An animal fat, such as cream, is a polysaturated fat which carries with it the problem of increasing the cholesterol content of the body. We are all familiar with the association of an elevated serum cholesterol and coronary artery disease.

At this time there is no scientific evaluation which will lay all the blame of coronary artery disease on cholesterol. There is at this time sufficient clinical evidence to associate an increased blood cholesterol level with this disease.

In a study of 149 male ulcer patients, the mortality rate from arteriosclerotic heart disease was 14 per cent higher than among white male subjects in the general population.[5]

There is a growing concern, as indicated in the medical literature that this clinical observation is true.

With these factors in mind, we have attempted to formulate a rational approach to the treatment of peptic ulcer.

To eliminate the hazard of increasing the cholesterol intake by the ingestion of a saturated fat, we have substituted corn oil, which is an unsaturated fat. Such a polyunsaturated fat produces the same results as cream, and most respects better. Further, there is evidence that an unsaturated fatty acid will prevent the absorption of cholesterol from the gastrointestinal tract.[6, 7]

The individual dose of any fat must be regulated. If a fat is introduced into the intestine in large amounts, it will bring about a depression of the gastric secretion for several hours, but will be followed by a phase of accelerated secretion. This is referred to as the bi-phasic effect of fat.[8] When the amount of fat administered is small in amount, the inhibitory phase is manifested, but the rebound phenomenon is absent.[9]

Fat plays its most important role in the treatment of ulcers which form in the duodenum. When fat enters the duodenum, it stimulates an increased formation of the hormone secretin. Secretin, acting on the pancreas causes it to flood the ulcer area with sodium bicarbonate, and a rapid reduction of the pH takes place.

Fats also stimulate the formation of cholestokinin which increases the flow of bile. Though bile is a weak anti-acid, it is thought that bile salts do have an inhibitory action on gastric secretion and motility.[10]

The one great hope in respect to any drug treatment of peptic ulcer is that it will disrupt or interfere with the process of hydrochloric acid formation without damaging the gastric cells or harming the host, and formulation of medicinal agents capable of enhancing the natural mechanism of the host.

This, I believe has been done to a great extent in the use of a mixture of calcium carbonate and corn oil. This mixture given in small doses on an hourly basis has produced surprisingly good results.[11]

Summary

Oil on ingestion inhibits gastric activity, and reduces the continued production of hydrochloric acid. By the use of polyunsaturated fat we eliminate the increased intake of cholesterol and lessen the hazard of an early death from coronary artery disease in the ulcer patient.

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Adverse Reaction to Synthetic Penicillin

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REPORT OF A CASE

Untoward reactions to penicillin, both mild and severe, are well documented in the literature. There are probably few physicians who have not had at least mild adverse reactions to penicillin given both orally and parenterally. As yet there have been no reports regarding unfavorable responses to synthetic penicillin (Potassium (a-Phenoxyethyl) Penicillin).

This product was developed by the Illinois Institute of Technology during 1959, and it is too early to find published articles on its effectiveness or untoward reactions.

At present there are available no fewer than five new penicillins produced by fermentation and partial synthesis. All affect the same organisms as older penicillins and have the same indications and precautions, although allergic reactions may be somewhat lessened. All produce early peak blood levels about twice as high as equivalent doses of oral Phenoxymethyl penicillin (Penicillin V).[1]

The report of the case below illustrates a case of allergic reaction to synthetic penicillin.

This 54-year-old man, a school teacher, reported that he had the flu and was taking some medications which he had obtained at a drug store. He had recently learned of the new oral synthetic penicillin and purchased some for the treatment of his illness. He had taken many types of oral penicillin in the past without difficulty.

On the 20th of January, 1960, the patient took one tablet and in a matter of 20 minutes developed an acute urticaria which was accompanied by difficult breathing, collapse, and vomiting. He was brought to the hospital immediately. When seen he had numerous urticarial areas on his body, and was quite apprehensive. His blood pressure was 114/70, pulse 82. His lungs seemed to be clear. His abdomen was normal to palpation. Complete blood count, serology, and urinalysis were all within normal limits. He was given 40 units of corticotrophin, IM, and 50 mg. of Diphenhydramine hydrochloride (Benadryl). The patient responded very well and was discharged from the hospital two days later.

It becomes apparent in reviewing the above case that the taking of synthetic penicillin is not without hazard. The manufacturers state in their literature that allergic reactions to oral penicillin are rare. They are more likely to occur in patients with history of hay fever, asthma, urticaria, and those previously who had reacted adversely to penicillin. Administration of oral penicillin in rare instances may produce acute anaphylaxis. Therefore epinephrine and cortico-steroids should be available for emergency treatment.

It becomes apparent that this form of penicillin should not be prescribed indiscriminately. Very definite indications should exist. One should also advise caution to patients who can obtain medications such as this without prescription. Probably some of this has come about as the result of somewhat erroneous statements in the lay press regarding this penicillin preparation.

It has been well established that prophylactic drugs, such as antihistamines, do not prevent penicillin reactions. Sensitivity tests are not predictable and it seems that the best preventive is its use only when absolutely indicated.[2]

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Heart Page

The Cardiovascular System in Thyrotoxicosis

Editor—Thomas N. Lynn, M.D.

Hyperfunction of the thyriod gland produces many alterations in the dynamics of blood flow and heart function. One of the more popular current theories on the mechanism of the translation of excess thyroid hormone into the hyperdynamism of the cardiovascular system suggests that tri-iodothyronine, the most active of the thyriod hormones, augments or potentiates the action of epinephrine, causing tachycardia, cardiac arrythmia, increased cardiac output, and a widened pulse pressure, all responses producible by the administration of epinephrine. This theory has been given further credence by reports citing clinical improvement in hyperthyroid patients following medication with reserpine or guanethidine, both of which have some adrenergic blocking action.

There remains, however, an unsettled opinion as to whether thyroid hormone has a direct effect on the heart muscle. There have been animal studies showing an increase in heart rate when the isolated heart is perfused with a high concentration of thyroid hormone and there have been autopsy studies showing lesions of the heart muscle fibers in persons with hyperthyroidism. However, this does not exclude the possibility that thyroid hormone is working through epinephrine to produce these changes. Evidence, though, is increasing that the tachycardia and high cardiac output are not solely due to reflexes signaling a greater peripheral demand for oxygen and other nutrients.

There are manifestations of hyperthyroid heart disease other than those previously mentioned: the pulmonary second sound may be increased, there may be a low-intensity apical diastolic rumble, sounding much like the murmur of mitral stenosis, and there may be an ejection murmur in the pulmonic area along the left sternal border, mimicking pulmonic stenosis. If all three of the above auscultatory findings are present, ventricular septal defect with left-to-right shunt might enter into the differential diagnosis. These murmurs are again the result of the high hyperthyroid blood flow across normal valve orifices, that would accommodate a normal blood flow without turbulence sufficient to cause an audible murmur.

Usually in the young individual, the clinical diagnosis of hyperthyroidism presents little difficulty. Unfortunately, this is not so true in the aging person, and it is equally unfortunate that statistically, the degree to which one has heart disease as a result of hyperthyroidism increases greatly in the older age range. This increased incidence is due probably to slowly advancing, but otherwise latent coexisting change in the coronary arteries. Its manifestations in the older person may consist of cardiomegaly, atrial fibrillation and difficult-to-control congestive heart failure.

Hyperthyroid heart disease is relatively low on the list when weighed in per cent incidence against the total of all forms of afflictions of the cardiovascular system, but since it does represent a "curable" form of heart disease, it would seem appropriate that it should be high on the list of diagnostic possibilities. Once thought of, the presence of hyperthyroidism is easily confirmed or eliminated by chemical or radioisotope studies.—T.N.L.

Message from the Dean

Since the time of Hippocrates, a search has been made for better ways to impart medical knowledge and skills to others. It is the duty of each medical school to scrutinize its curriculum continually and make such changes as will benefit the students. We organized a special committee three years ago to reevaluate the curriculum of the School of Medicine. The committee delved into the philosophy of medical education, interviewed faculty members and students, interns and residents and practitioners, and visited other schools. From these studies the regular curriculum committee presented to the faculty a new curriculum based as nearly as possible on student needs and the capabilities and desires of our faculty.

A new feature of the curriculum is inclusion of elective subjects for a reasonable period of time without greatly increasing the length of the school year. One of the criticisms of the medical school curriculum has been that it was stereotyped and allowed little opportunity to explore any subject in depth as do the curricula in other branches of science. We think this objection has been met. Elective courses are to be given seriously and students are expected to take them seriously, for they will be graded exactly as other courses. They offer a richly rewarding experience. With one-sixth of the curriculum set aside for electives, one might think the basic instruction has been slighted, but this is not true. Hour for hour the same amount of time has been reserved for the standard curriculum. Changes, however, have been made. The number of formal lecture periods for an entire class has been decreased. Those lecture periods eliminated will be utilized by each department for teaching smaller groups of assigned students. By eliminating the quarter system in the third year, lectures do not have to be repeated. The Department of Psychiatry, Neurology and Behavioral Sciences is initiating a unique course running through all four years in which the faculty will endeavor to give the students a graduated approach to the mysteries of human behavior.

In the fourth year the outpatient experience will cover one-third of the year without interruption, giving the student a chance to learn approaches to diagnosis and care of the patient through all disciplines at the same time.

The curriculum is elastic enough to be easily adaptable to change if necessary, and to be compressed in event of national emergency. Of course there will be "bugs," but they can be dealt with. We believe the curriculum utilizes our resources in the best and most extensive manner for the benefit of the medical student, and that it encompasses modern principles of medical education.

Mark R Everett

The Serum Gylcoproteins and Seromucoid in Rheumatic Disease*

M. R. SHETLAR, Ph.D.**

Introduction

THE STUDIES of the protein bound carbohydrates of serum date back at least to the beginning of this century. The early work involved the determination of the reducing power of serum or serum proteins before and after hydrolysis. The increase in reducing power after hydrolysis was at first credited to protein bound glucose. Sometime later it was realized that the protein bound carbohydrate was not glucose, but consisted of more exotic monosaccharide residues—galactose, monnose, glucosamine and fucose__ recently sialic acid has been found in serum protein. The studies of these protein bound carbohydrates were largely of academic interest until it was demonstrated that these serum components were elevated in certain disease processes. The field as it relates to clinical chemistry has now become too large to adequately review in this presentation. Recent reviews have been made by Winzler,[1] Stary[2] and others.

Nomenclature

The nomenclature of the protein bound carbohydrates of serum is not as yet well established. Therefore, to avoid confusion in this presentation, the definitions of serum glycoprotein and seromucoid will be given as follows.

Serum glycoprotein may be defined as the total protein-bound-carbohydrate found in serum, and is determined by precipitation of the protein followed by quantitation of the carbohydrate moiety. The carbohydrate portion is usually quantitated by hexose or hexosamine determinations. In most of the work reported here hexose has been determined by reaction with tryptophan in strong sulfuric acid solution. This reaction was first described by Sheppard and Everett,[3] and further developed as a quantitative method by Shetlar, Foster and Everett.[4] In a series of studies involving rheumatic fever patients, bound hexose was found to be closely correlated with bound hexosamine (table I). As bound hexose is much easier to determine than is hexosamine, most of the data hereafter presented involve only bound hexose levels.

Patient	Number of Samples	Hexose ÷ Hexosamine	Correlation Coefficient (r)
1	26	1.59	.97
2	10	1.61	.84
3	11	1.69	.90
4	11	1.65	.98
5	11	1.61	.79

TABLE I

Correlation between protein bound hexose and hexosamine of the serum of patients with rheumatic fever.

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Seromucoid may be defined as that portion of the serum glycoprotein which is not precipitated by perchloric acid, but is precipitated by phosphotungstic acid. This fraction is quantitated by tyrosine, hexose, hexosamine, or protein determinations of the phosphotungstic acid precipitate. In the work presented here, the seromucoid has been estimated by hexose determinations using the tryptophan method.

Bound Carbohydrate of Serum Fractions

If one fractionates serum protein into its various fractions by any of the available procedures, the carbohydrate content of these fractions may be determined. The carbohydrate contents of albumin preparations have been found to be quite low, but all of the globulin fractions contained an appreciable amount of bound carbohydrate and, therefore, may properly be called glycoproteins by the definition of the Committee on Protein Nomenclature of the American Physiological Society and the American Society of Biochemists.[5]

The carbohydrate bound to various serum protein fractions has been estimated by separating the proteins by paper electrophoresis. The paper strip was then stained with the periodic-acid-Schiff reagent. For identification purposes, a second strip for protein studies was carried through the electrophoretic procedure with the one stained for glycoproteins. Typical densitometer patterns of glycoprotein strips are shown in figure 1. The sample from a patient with rheumatoid arthritis differed from that of a normal subject largely by having increased a_1, and a_2 fractions.[6]

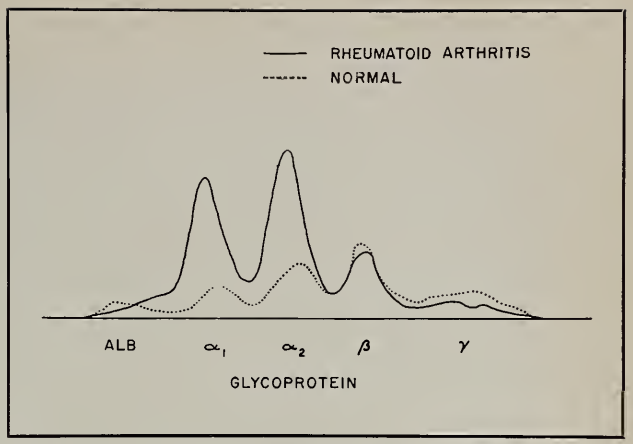


Figure 1. Typical densitometer tracings of paper strip electrophoretic patterns stained by the Periodic-acid-Schiff reagents for protein bound carbohydrate. Solid line curve is from serum of a patient with severe active rheumatoid arthritis (Act. IV, table V). Dotted line curve is from serum of a normal subject. The increase of bound carbohydrate in the a_1- and a_2- globulin ranges in rheumatoid arthritis is noteworthy.

Results of normal values of serum glycoproteins and seromucoid expressed as bound hexose are shown in table II. It may be noticed that glycoprotein and seromucoid values were comparatively low in fetal samples and increase with age of the individual. Also noticeable was the increase of glyco-

AGE OR CONDITION	NO. SAMPLES	SERUM GLYCOPROTEIN HEXOSE Mg/100 ml.		HEXOSE: PROTEIN RATIO*		SEROMUCOID HEXOSE Mg/100 ml.	
Fetal	15	80	(62-103)	1.41	(1.05-1.77)	6	(3-9)
3-8 yrs.	8	105	(94-118)	1.60	(1.47-1.82)	——	
21-49 yrs.							
Males	18	110	(93-126)	1.58	(1.26-1.90)		
Females	10	111	(100-125)	1.58	(1.42-1.81)	12	(8-18)
61-85 yrs.	15	129	(104-138)	1.79	(1.62-2.06)		
Pregnancy (8-10th month)							
Primigravida	13	152	(120-172)	2.46	(2.26-2.63)		
Multigravida	16	150	(123-191)	2.42	(1.96-2.82)	12	(8-14)
Pregnancy (4th month)	6	122	(110-136)	1.87	(1.70-2.10)		

*Grams of bound hexose per 100 grams of serum protein.

TABLE II

Summary of serum glycoprotein in the normal human subject.

	SERUM GLYCOPROTEIN HEXOSE Mg/100 ml.	HEXOSE: PROTEIN RATIO*	SERUM PROTEIN Gm/100 ml.	SEROMUCOID HEXOSE Mg/100 ml.
Average Normal (48 samples)	116	1.66	7.02	16
Range	103-128	1.40-1.77	6.23-7.77	12-18
Respiratory Infection				
with Fever 1)	162	2.15	7.52	23
2)	164	2.11	7.78	21
Respiratory Infection				
without Fever	139	1.77	7.89	——

*Grams of bound hexose per 100 grams of serum protein.

TABLE III
Variation of serum glycoprotein in one individual over a ten year period

proteins in pregnancy without an accompanying elevation of seromucoid[7]

Table III depicts the variation of serum glycoproteins in one individual over a ten year period. Variation of the serum glycoproteins from time to time was of the same order of magnitude as the variation of the serum protein. The definitely elevated levels following a respiratory infection with fever and the slightly elevated levels following respiratory infection without fever were noteworthy.

CONDITION	NO.	SERUM GLYCOPROTEIN HEXOSE Mg/100 ml.	HEXOSE: PROTEIN RATIO*	SEROMUCOID HEXOSE Mg/100 ml.
Normal	80	114 ± 3	1.59 ± .03	11 ± 1
Malignancy	105	171 ± 3	2.69 ± .05	28 ± 2
Benign Lesions	31	123 ± 3	1.96 ± .04	——
Rheumatoid Arthritis				
Inactive	8	150 ± 4	1.91 ± .03	20 ± 2
Activity 2	13	176 ± 15	2.26 ± .06	30 ± 2
Activity 3 & 4	12	197 ± 6	2.73 ± .06	30 ± 1
Psychogenic Rheumatism	3	118	1.71	12
Degenerative Joint D.	28	134 ± 3	1.85 ±.02	13 ± 1
Gout, Active	2	188	2.65	22
Gout, Inactive	6	138	2.04	15
Rheumatic Fever				
Active	18	205 ± 7	2.78 ± .10	30 ± 2
Inactive	21	104 ± 4	1.91 ± .06	15 ± 1
Tuberculosis				
Minimal Active	6	144 ± 5	2.04 ± .07	19 ± 4
Moderate Advanced, Active	13	161 ± 7	2.21 ± .08	20 ± 2
Far Advanced, Active	23	185 ± 7	2.44 ± .08	19 ± 1

TABLE IV
Changes of serum glycoproteins in diseased states**

*Grams of bound hexose per 100 grams of serum protein.
**Figures following ± sign are standard errors.

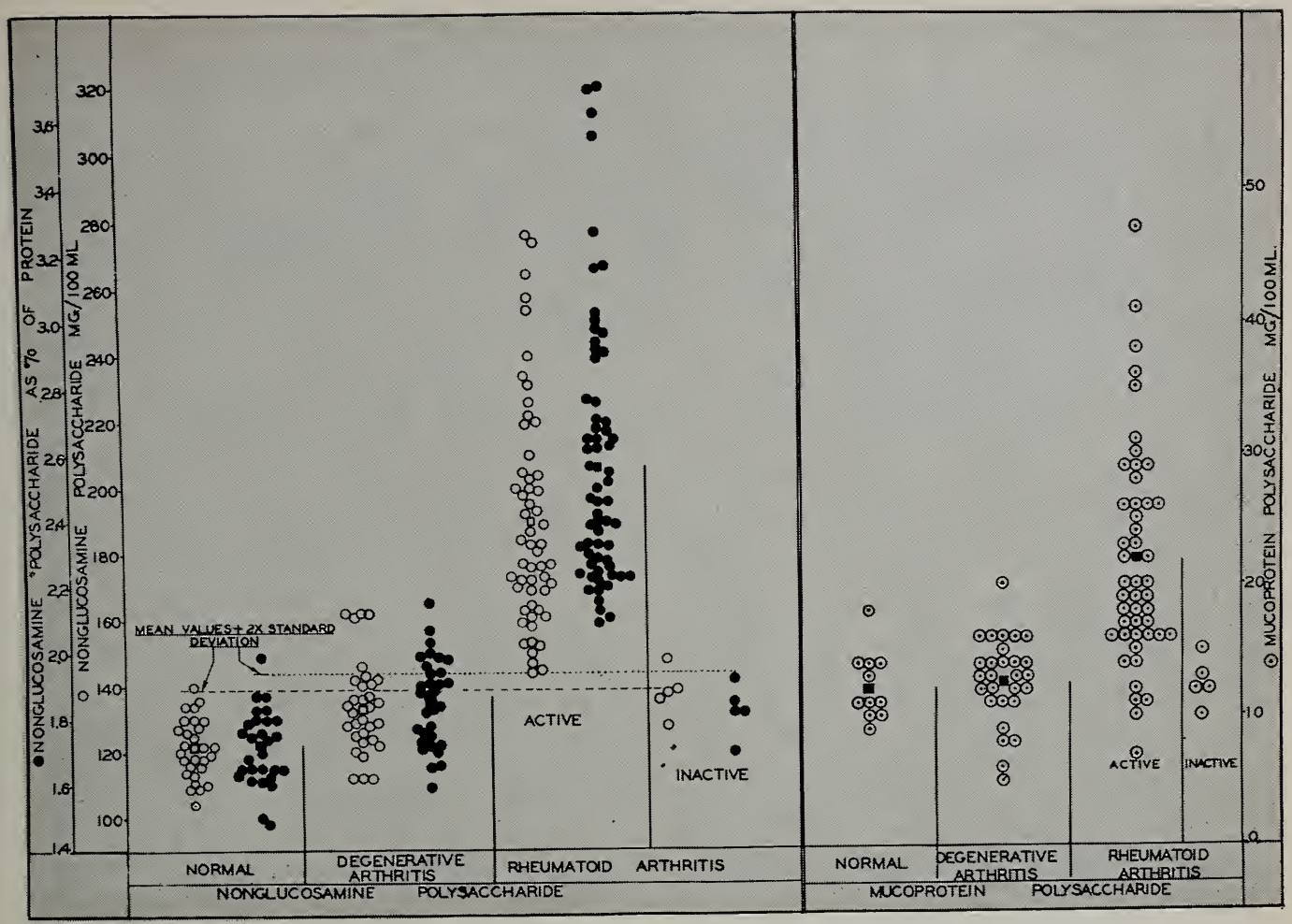


Figure 2. Total serum glycoprotein (serum polysaccharide) and seromucoid levels (mucoprotein) of normal subjects, of patients with degenerative joint disease and of patients with active and inactive rheumatoid arthritis. Glycoprotein levels expressed as total bound hexose per 100 ml. of serum are shown as open circles, while the glycoprotein levels expressed as a percentage of serum protein are shown as closed circles. Seromucoid (mucoprotein) hexose levels are expressed in milligrams per 100 ml. of serum and are depicted as open circles with black center. The square in each group represents the average for the group.

With these data as a background, changes in disease states may now be considered (table IV).[8] An important primary point is that elevated glycoprotein or seromucoid levels are not unique to patients with rheumatoid arthritis, but are found in many disease states—malignancy and tuberculosis, for example, as well as rheumatic fever and gout. Actually, in this laboratory an elevation in patients with rheumatoid arthritis was first noted in 1948 while making a study primarily devoted to cancer.[9] Patients with degenerative joint disease have only slightly elevated glycoproteins, while a few patients who were finally considered to have psychogenic rheumatism had normal glycoprotein and seromucoid levels.

The situation which occurs in rheumatic diseases has been more closely considered. Figure 2 graphically depicts the glycoproteins and seromucoids of patients with rheumatoid arthritis and with degenerative joint disease. Open circles represent glycoprotein hexose levels expressed as mg./100 ml. of serum. Closed circles represent the same data expressed as a ratio of glycoprotein hexose to serum protein. No overlap of the normal and active rheumatoid groups occurred with the latter method of presentation. Seromucoid results showed more overlapping. It appears, therefore, that the serum glycoprotein expressed as a ratio to the serum protein may have value in indicating the clinical activity of rheumatoid arthritis.

Correlation with Clinical Activity

In order to treat the data statistically, some one-figure parameter of inflammatory

Clinical Activity	Morning Stiffness	Sleep Pattern	Malaise, Fatigability, and Weakness	Acute Joint Manifestations	Fever	Appetite	Physical Accomplishments
I (None)	None	Undisturbed	Absent	Absent	None	Good	Limited only by deformity
II (Mild)	10 min.	Undisturbed	Slight	Transient joint pains	None	Untroubled	Limited only by fatigability and deformity
III (Moderate)	< 30 min.	Mild nocturnal restlessness; early morning awakening	Moderate	Joint swelling without redness or heat	None or slight temp. elevation	Capricious	Limited by joint pain, fatigability, and deformity
IV (Severe)	> 30 min.	Frequent awakening (fatigue)	Pronounced	Joint swelling with redness and heat	Elevation of body temp.	Anorexia	Limited by general malaise, joint pain, fatigability, and deformity

TABLE V

activity was required. The patients were rated clinically according to the criteria listed in table V; these criteria have been discussed in a previous report.[10] Using these ratings the laboratory data were treated statistically with the results shown in table VI. A number of the factors were found to have a significant correlation with clinical activity.[6] The total glycoprotein hexose, expressed as a ratio to the serum protein, however, is found to have the highest correlation. This finding is somewhat surprising as one would expect the glycoproteins of the α globulins which exhibit elevations in rheumatoid arthritis to be more closely correlated with activity. One explanation is that the analytical precision involved in the estimation of the glycoproteins in serum fractions is so low that the correlation coefficients are affected.

Acid Mucopolysaccharides in Serum

The amounts of uronic acid containing polysaccharides in serum are very low, but

	r*	t value+	P
Total Glycoprotein Hexose: Protein Ratio≠	0.914	12.50	.01
α_1 Globulin Hexose: Protein Ratio≠	0.559	3.75	.01
α_2 Globulin Hexose: Protein Ratio≠	0.296	1.72	.10
Albumin % of Total Protein	-0.563	3.79	.01
α_1 Globulin % of Total Protein	0.110	0.64	.30
α_2 Globulin % of Total Protein	0.635	4.58	.01
β Globulin % of Total Protein	0.183	1.34	.15
γ Globulin % of Total Protein	0.306	1.79	.10
α_1 Globulin Hexose, mg./100 ml.	0.654	4.82	.01
α_2 Globulin Hexose, mg./100 ml.	0.684	5.21	.01
Seromucoid Hexose, mg./100 ml.	0.689	3.49	.01
Sedimentation Rate	0.332	2.40	.05
Sialic acid**	0.588	5.14	.01

*r = Correlation Coefficient.

$+t = \frac{n^{\frac{1}{2}} r}{(1-r^2)^{\frac{1}{2}}}$ $n = N - 2.$

≠Bound hexose expressed as grams of hexose per 100 grams of the protein involved.

**As indicated by the diphenylamine reaction.

TABLE VI

Correlation of laboratory data with a rating of clinical activity.

No. of Animals in Group	Normal 11	Arthritic Inactive 4	Arthritic Active 12	Initial Infection 16
Total serum glycoprotein (mg./100 ml.)*	163 ± 6	162	229 ± 5 ≠	205 ± 4 ≠
Seromucoid fraction (mg./100 ml).*	12 ± .7	16	31 ± 1.6 ≠	29 ± 1.9 ≠
Total serum protein (g./100 ml.)	7.17 ± .11	7.10	7.47 ± .12 ≠	7.23 ± .09 ≠
(Total serum glycoprotein ÷ total protein) × 100	2.27 ± .06	2.28	3.10 ± .06 ≠	2.85 ± .06 ≠
[(Total serum glycoprotein-seromucoid) ÷ total protein] × 100	2.10 ± .05	2.04	2.65 ± .04 ≠	2.45 ± .03 ≠
Seromucoid ÷ total glycoprotein	.075 ± .002	.099	.136 ± .006≠	.138 ± .007≠

* Expressed as bound hexose (galactose-mannose).

≠ Significantly higher than normal value at 1% level of probability.

TABLE VII

Effects of swine arthritis and acute erysipelas infection on protein-bound carbohydrates and proteins of swine.**
**Figures following ± sign are standard errors.

have recently been studied by several groups, Badin et al,[11] Bollet[12] and Kerby.[13] Kerby reported average levels of 0.226, 0.356, and 0.372 of uronic acid in milligrams per 100 ml. of serum for normal subjects, patients with non-rheumatoid inflammatory conditions, and patients with rheumatoid arthritis, respectively. Levels for patients with rheumatoid arthritis were not significantly different than those of patients with other inflammatory conditions. The low serum levels of uronic acid containing material as compared to the bound hexose or hexosamine levels are of interest in considering the origin of the serum glycoproteins.

Serum Glycoproteins in Arthritic Swine

Data in table VII is presented to call attention to an arthritic condition in swine in which the glycoprotein picture resembles that found in human rheumatoid arthritis.[14] Swine are to be recommended as experimental animals for the study of this disease. As described by Neher and co-workers,[15] arthritis in swine develops several weeks after an acute erysipelas infection.

Origin and Function of Serum Glycoprotein

Several hypotheses concerning the origin of elevated serum glycoprotein levels have been suggested. It may be fruitful to consider them together on a comparative basis.

1. *Glycoproteins are released into the blood stream from injured or inflamed tissue.*[16] This suggestion has the merit of simplicity. The fact that serum does not contain appreciable amounts of acid mucopolysaccharides (see section above on acid mucopolysaccharides) while tissues contain amounts of these components has been cited[1] as evidence against this hypothesis. However, if one postulates the existence of a mechanism to rapidly remove the acid mucopolysaccharides from serum, this objection may be circumvented. In this connection, acid mucopolysaccharides are known to occur in the urine. According to Di Ferrante[17] normal individuals excrete 2.7 to 5.4 mg. daily of acid mucopolysaccharide expressed as glucuronic acid. These figures are increased in patients with active rheumatoid arthritis to as much as 14.6 mg./day. This may indicate the existence of active renal mechanisms for the clearance of the acid mucopolysaccharides which in turn would account for the low serum levels following tissue injury. There is much evidence that carbohydrates which do not contain uronic acids occur in tissue.[18] In inflammatory states these tissue components may be released into the blood stream while the mucopolysaccharide components containing uronic acid are either retained in the injured tissue or rapidly removed from the blood stream. Release of such components may account for much of the elevated serum glycoprotein which occurs in inflammation.

2. *Glycoproteins arise as a response of the organism to tissue injury*[19] *or proliferation.*[7,9] According to this suggestion injured tissue components initiate some mechanism which causes increased production of serum

proteins which contain large amounts of bound carbohydrate. These proteins may have some physiological value in the organism's defense mechanisms or in the reparative processes. In support of this hypothesis may be cited the fact that many types of injury, either clinical or experimental, produce essentially the same response.[20] There are, however, exceptions and possibly differences of a quantitative nature in the distribution of bound carbohydrate among the serum protein fractions.

In contrast to inflammatory states where serum glycoprotein and seromucoid are both elevated, the sera of pregnant women show high serum glycoprotein levels, but normal seromucoid levels (table II). Electrophoretic studies of the sera of pregnant women indicate that most of the glycoprotein elevation is due to an alteration in β globulin. It may be tentatively suggested that the influence of inflammation on the protein synthetic processes is different from that found when only tissue proliferation or growth is involved. This would appear to be a fruitful field for further investigation.

3. *Glycoproteoins in serum become elevated because certain tissues (for example cancer tissue),*[21] *utilize proteins low in bound carbohydrate in preference to those high in bound carbohydrate.* This hypothesis suggests that the serum glycoproteins are relatively inert physiologically and that inflammatory and other pathologic conditions result in a higher utilization of proteins, such as serum albumin, which are low in bound carbohydrate. This suggestion is strengthened by the fact that a decrease in serum albumin occurs in inflammation conditions. It has not been established, however, whether this is due to a more rapid utilization or to a decrease in production of albumin.

In general, it is not possible at this time to decide which of the above hypotheses to favor. A consideration of these possibilities should, however, prove useful in designing further experimental work.

Summary. The research conducted in the field of serum glycoproteins (protein bound carbohydrate) as it relates to rheumatoid arthritis has been reviewed. High serum glycoprotein and seromucoid levels are consistently found in patients with active rheumatoid arthritis, indicating that profound alterations in the protein metabolism occur in this disease. High serum glycoprotein and seromucoid levels are not specific for rheumatoid arthritis, but are found in numerous other conditions. However, it may be emphasized that serum glycoprotein levels have a high correlation with the clinical activity of rheumatoid arthritis and therefore, may be of use in evaluating the clinical status of such patients. Hypotheses concerning the origin and function of the serum glycoproteins have been discussed.

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The Chemistry and Metabolism of the Acid Mucopolysaccharides of the Ground Substance of Connective Tissue

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ACID MUCOPOLYSACCHARIDES are characteristic components of the ground substance of connective tissue. They were first characterized chemically about 25 years ago,[1] and have been the subject of increasingly intensive study since. Growing knowledge of the chemical and physical properties of these compounds has greatly increased our understanding of the physiology of connective tissue and of the changes which occur in disease. In this paper an attempt will be made to outline the present status of our knowledge of the chemistry and metabolism of the acid mucopolysaccharides.

Composition of the acid mucopolysaccharides: The acid mucopolysaccharides are carbohydrate compounds of large molecular weight. Most are associated with protein *in vivo*, but the nature of the bonds between polysaccharide and protein is in doubt. This association with protein is responsible for physical properties of some of these compounds; chondromucoid, a complex of chondroitin sulfate and protein occurring in cartilage, loses its viscosity when the protein moiety is digested with trypsin.[2] Hyaluronic acid, however, retains its viscosity *in vitro* when isolated free of protein but other physical properties are altered by proteolysis.[3]

There are many individual acid mucopolysaccharides, not all of which have been chemically characterized. Some of the details of their chemical composition are given in table I. In general they are polymers of repeating disaccharide units which consist of a basic sugar attached by a glycosidic linkage to an acidic sugar. In each, the basic sugar, or hexosamine, is an hexose with an amino group on the second carbon; this amino group usually is acetylated. N-acetylglucosamine and N-acetylgalactosamine are the two basic sugars which have been found in acid mucopolysaccharides.* In many compounds a sulfate group replaces anhydroxyl on one or more carbons of the hexosamine.[5] The acidic sugar is a hexuronic acid (a hexose with a carboxyl group on the sixth carbon); glucuronic acid is the hexuronic acid present in most of these compounds. The only other hexuronic acid which has been found in an acid mucopolysaccharide is L-iduronic acid, a 5-epimer of glucuronic acid, which is present in chondroitin sulfate B.[5] One mucopolysaccharide, keratosulfate, has no hexuronic acid component. It contains a sulfated glucosamine moiety linked to galactose (which may also be sulfated) as the basic repeating unit which forms the polymer.[7]

Properties of the acid mucopolysaccharides: In water, most of these compounds form viscous solutions or gels. This fundamental property of the "matrix," or ground substance, functions to lubricate moving surfaces such as joints and serous membranes. The acid mucopolysaccharides are also polyelectrolytes; they behave like ion exchange resins, binding ions and water. It is of interest in this regard to note that in aqueous solutions of hyaluronate, 99.7% of each particle is water.[8] An early demonstra-

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*N-acetyl mannosamine is a third naturally occurring hexosamine, thus far found only in sialic acid, and a component of serum, salivary and gastric glycoprotein.[4]

Mucopolysaccharide	Hexosamine	Hexuronic acid	Other
Hyaluronic Acid	N-acetylglucosamine	D-glucuronic acid	
Chondroitin	N-acetylgalactosamine	D-glucuronic acid	
Chondroitin Sulfate A	N-acetylgalactosamine-4-SO_4	D-glucuronic acid	
Chondroitin Sulfate B	N-acetylgalactosamine-4-SO_4	L-iduronic acid	
Chondroitin Sulfate C	N-acetylgalactosamine-6-SO_4	D-glucuronic acid	
Heparitin Sulfate	N-acetylglucosamine* N-SO_4-glucosamine*	D-glucuronic acid	
Keratosulfate	Glucosamine-SO_4	—	Galactose (-?SO_4)

*It has been suggested by K. Meyer that the repeating unit of heparitin sulfate is a tetrasaccharide consisting of two glucosamine-glucuronic acid units, with one amino group of each pair of glucosamines N-acetylated and the other N-sulfated.

Table 1. Composition of the repeating units in acid mucopolysaccharides of connective tissue.

tion of the affinity of connective tissue for water and electrolytes was made by Opie; he found that parenchymal tissues take up water from hypotonic salt solutions and lose water to hypertonic solutions, but tissues rich in connective tissue take up water from both weak and strong salt solutions.[9] The binding of ions by mucopolysaccharides creates reservoirs of sodium and other electrolytes in connective tissue.

A preferential affinity of chondroitin sulfate for divalent ions, particularly calcium, has been demonstrated. The calcium concentration in cartilage is proportional to its chondroitin sulfate content,[10] and the concentration of bound calcium in cartilage may be ten times greater than that in plasma.[11] Histologically, a local increase in chondroitin sulfate content, indicated by increased metachromasia, can be seen in sites of calcification such as newly calcified bone, zones of provisional calcification of cartilage, and areas of pathologic calcification including certain types of renal calculi.[11,12,13] These observations point to a significant role of chondroitin sulfate in the mechanism of calcification.

The acid mucopolysaccharides may also play a role in collagen fibril formation. The formation of fibrils from the soluble form of collagen, tropocollagen, has been shown to occur *in vitro* on the addition of chondroitin sulfate.[14] Fibrillogenesis can be induced *in vitro* by a variety of influences, but the intimate association of chondroitin sulfate and collagen *in vivo*, as demonstrated by Patridge,[15] supports the likelihood that chondroitin sulfate plays a role in collagen metabolism. The repeating units of the mucopolysaccharide may act as a template guiding the spacing of units in the protein molecule.

Distribution of acid mucopolysaccharides: In most locations a mixture of acid mucopolysaccharides is found. An exception to this is synovial membrane and synovial fluid, where hyaluronic acid is the only mucopolysaccharide present.[16] Therefore, if an abnormality in the metabolism of acid mucopolysaccharides is fundamental to the pathogenesis of rheumatoid arthritis, it must concern the metabolism of hyaluronic acid. The specific composition of the mixture of mucopolysaccharides in some tissues is of interest. Hyaline cartilage contains both chondroitin sulfate A and chondroitin sulfate C, but it has been found that the proportion of chondroitin sulfate C is very low at birth and increases progressively with age.[5] During the decades in which osteoarthritis is most frequently found chondroitin sulfate C is much more abundant than chondroitin sulfate A. Since failure of the formation of cartilage matrix seems to be a fundamental aspect of the pathogenesis of osteoarthritis, it seems important to approach this problem by study of metabolism of chondroitin sulfate C. It has recently been demonstrated that two acid mucopolysaccharides, chondroitin sulfate B and heparitin SO_4 are present in large amounts in tissues and in the urine of patients with Hurler's syndrome (gargoylism).[17,18] Study of metabolism of these substances, therefore, would seem to be fundamental to study of this disease.

Intermediary metabolism of the acid muco-

polysaccharides: The enzymatic steps in the synthesis and breakdown of the acid mucopolysaccharides have been studied in considerable detail in recent years. This work has been done primarily in yeast and streptococci, and to some extent in parenchymal organs. Recently, it has been found that the metabolism of mucopolysaccharides can be studied in mammalian connective tissue and human synovial tissue.[19] For this purpose, the granulation tissue which fills inert synthetic sponges inserted under skin of animals has been used. This tissue consists almost solely of fibroblasts; the acid mucopolysaccharide, protein and desoxyribose nucleic acid content of this tissue has been studied.[20]

Of primary importance in the metabolism of the mucopolysaccharides is the observation that labelled glucose is incorporated directly into both the hexosamine and the uronic acid moieties of mucopolysaccharides without change in the location of the labelled carbon.[21, 22] This indicates that the hexose molecule is not cleaved and reassembled during the synthesis of the mucopolysaccharide.

Also of fundamental importance is the observation that uridine nucleotides, which play a role in the metabolism of many carbohydrate compounds, are involved in the synthesis of the mucopolysaccharides. Uridine diphosphoglucuronic acid (UDPGA) is the donor of the glucuronic acid moiety[23] and uridine diphosphoacetylglucosamine (UDPAG) the donor of the N-acetylglucosamine moiety[23, 24] in hyaluronic acid synthesis. Uridine diphosphoglucose (UDPG), the precursor of UDPGA, and UDPAG have been found isolated from extracts of mammalian connective tissue.[25]

The steps in the intermediary metabolism of the glucuronic acid component of hyaluronic acid are summarized in table II. These are the same steps which occur in the liver in the synthesis of UDPGA, which serves as the donor of glucuronic acid in the detoxification and excretion of wide variety of compounds.[26] The enzymes which are necessary to synthesize UDPGA from glucose (hexokinase, phosphoglucomutase, UDPG pyrophosphorylase, and UDPG dehydrogenase) have been demonstrated in mammalian connective tissue.[19]

The intermediary metabolism of the acetylglucosamine component of hyaluronic acid is more complex. Work in yeast, streptococci, liver and kidney have demonstrated many enzymes which may be involved in the synthesis of the donor of the acetylglucosamine, UDPAG. Some of the possible routes in the synthesis of this compound are shown in table III. The relative activity of each of these pathways in connective tissue is a subject of active study at the moment.

Another major problem in the metabolism of mucopolysaccharides is the nature of the system which links the glucuronic acid and acetylglucosamine provided by their respective uridine nucleotides. Activity of this system has been demonstrated in cell free extracts of streptococci by Markovitz, Cifonelli and Dorfman.[24] The exact nature and mechanism of action of this enzyme is as yet unclear. In liver, kidney and intestine it has been found that the enzyme gulcuronosyl transferase links glucuronic acid, donated by UDPGA, to a variety of phenolic and alcoholic compounds. Glucuronosyl transferase has been shown to be present in con-

1. Glucose + ATP	hexokinase $\longrightarrow$	glucose-6-PO_4 + ADP
2. Glucose-6-PO_4	phosphoglucomutase $\rightleftharpoons$	glucose-1-PO_4
3. Glucose-1-PO_4 + uridine triphosphate (UTP)	UDPG pyrophosphorylase $\rightleftharpoons$	uridine diphosphoglucose (UDPG) + PP
4. UDPG + 2 DPN	UDPG dehydrogenase $\longrightarrow$	uridine diphosphoglucuronic acid (UDPGA) + 2 DPNH + $2H^+$

Table II. Steps in the synthesis of uridine diphosphoglucuronic acid, the donor of glucuronic acid in mucopolysaccharide synthesis.

Fructose-6-PO_4 + glutamine	Aminotransferase ⟶⟵	Glucosamine-6-PO_4 + glutamic acid
Glucosamine-6-PO_4 + acetyl coenzyme A	Acetylase ⟶⟵	Acetylglucosamine-6-PO_4 + coenzyme A
Acetylglucosamine-6-PO_4	Phosphoisomerase ⟶⟵	Acetylglucosamine-1-PO_4
Acetylglucosamine-1-PO_4 + uridine triphosphate (UTP)	UDPAG pyrophosphorylase ⟶⟵	Uridine diphosphoacetylglucosamine + PP (UDPAG)

Table III. One possible route in the synthesis of uridine diphosphoacetylglucosamine, the donor of acetylglucosamine in the synthesis of hyaluronic acid.

nective tissue[19] but there is considerable doubt as to its role in mucopolysaccharide metabolism.

Less information is available concerning the breakdown of mucopolysaccharides in connective tissue. Testicular hyaluronidase has been shown to depolymerize hyaluronic acid and chondroitin sulfate to oligosaccharides;[27] however, the testis is the only mammalian tissue which has been found to contain this enzyme and its role in connective tissue mucopolysaccharide metabolism is doubtful. Beta-glucuronidase, which is present in most tissues including connective tissue and human synovial tissue,[19] splits the glucuronidic link between the first carbon of the glucuronic acid and third carbon of the acetylglucosamine in hyalobiuronic acid, the disaccharide repeating unit of the hyaluronic acid polymer.[27] Beta-glucosaminidase, which is also present in most tissues, splits the other bond in the chain, the glucosaminidic linkage between the first carbon of the acetylglucosamine and the fourth carbon of the glucuronic acid.[28] These two enzymes acting in concert on alternate bonds may depolymerize polysaccharide units, or may only break apart oligosaccharides previously prepared by a hyaluronidase-like depolymerase.

The rate of turnover of acid mucopolysaccharides in rabbit skin has been studied with the aid of C^{14} labelled acetate and S^{35} labelled sulfate by Shiller and Dorfman.[29] Hyaluronic acid turnover is faster than that of the sulfate containing mucopolysaccharides; a probable turnover rate of two days was found, indicating relatively active synthesis and breakdown of this compound *in vivo*.

Hormonal effects on connective tissue mucopolysaccharides: Observations of considerable clinical importance have been made concerning hormonal effects on connective tissue mucopolysaccharides. For example, hypothyroid states are known to be associated with myxedema, in which the "mucinous edema" is due to an increase in the mucopolysaccharide content of skin, subcutaneous and other tissues. Histochemical studies have shown that this accumulation is present in the hypothyroidism due to primary failure of thyroid function as well as that due to failure of pituitary function; these changes disappear when thyroid hormone is administered to either type of patient.[30] To confuse the issue, however, a similar change is found clinically and histochemically in the pretibial skin of patients with hyperthyroidism and exophthalmos; this change persists after these patients are made euthyroid, and is not affected by large doses of thyroid hormone given for long periods.[31,32] Chemically, increased concentrations of acid mucopolysaccharides have been demonstrated in the skin of patients with pretibial myxedema, both locally and generally.[32] Although the clinical, histochemical and chemical findings in the skin are similar in these two types of disordered thyroid function, there are differences in the underlying endocrinologic abnormality and response to therapy. In all probability, therefore, the basic mechanisms of pathogenesis are different. It has been postulated that a direct effect of pituitary thyrotropic hormone is responsible for the changes in mucopolysaccharide content of the skin and orbit in hyperthyroidism with exophthalmos. Recently evidence has been found to support this concept, since an increase in mucopolysaccharide concentration has been found in the thyroid gland, neck muscle and extra-

ocular muscles of dogs treated with thyrotropic hormone.[33]

The effects of adrenal cortical hormones and sex hormones on the acid mucopolysaccharides of connective tissue have also been studied to some extent; the therapeutic effects of adrenal steroid hormones in the rheumatic diseases have stimulated interest in this subject. Cortisone and related steroids have been shown to inhibit fibroblast proliferation and wound healing[34] and to decrease hyaluronate and chondroitin sulfate synthesis *in vivo*.[35] The mechanism of this influence on connective tissue is being studied at the enzymatic level. A prime example of the influence of sex hormones on mucopolysaccharides is the stimulation of hyaluronic acid production in the cock's comb by testosterone.[36]

The poor wound healing, susceptibility to infection and degenerative change which occur in connective tissue in diabetics has stimulated investigation of the effect of diabetes on mucopolysaccharide metabolism. Since glucose is the immediate precursor of hexosamine and hexuronic acid components of acid mucopolysaccharides, factors influencing the availability of glucose for the production of these compounds may influence connective tissue metabolism. Shiller and Dorfman have shown that the incorporation of labelled acetate and sulfate into mucopolysaccharides in the skin is reduced in diabetic animals to one-third that of controls.[37]

Conclusions

We have seen a rapid increase in knowledge of the chemistry and metabolism of mucopolysaccharides in recent years, and particularly in the past decade. Although their existence was only suspected 25 years ago, at the present time we know a great deal about their composition, chemical properties and intermediary metabolism, and we are beginning to understand the changes which occur in disease. It is not unreasonable to expect that the rate of accumulation of new information will continue to be high, and that new light will be shed on many clinical problems in the near future.

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ABSTRACTS

Treatment of Staphylococcal Infections In the Young Infant With Tetracycline And Novobiocin in Combination

MARY I. ABBOTT* and HARRIS D. RILEY, Jr.**

AM&CT, 8: 23-28, January 1961

Twenty-five infants with proved straphylococcal infections were treated with a combination of tetracycline and novobiocin (in a 2:1 ratio) with potassium metaphosphate. All of the causative strains of staphylococci were coagulase positive, and the majority were phage type 70 or 44 A. Of the 25 patients which included 20 infants with clinically severe pyoderma and 5 with staphylococcal pneumonia and septicemia, 24 exhibited a satisfactory clinical and bacteriological response to treatment with this antibiotic combination. One patient with staphylococcal pneumonia and one of the two infants with streptococcal omphalitis did not respond. The drug was well tolerated and produced no untoward reactions.

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Albumin Binding of Chlorpropamide

PHILIP C. JOHNSON,* K. M. WEST,** and FRANKIE MASTERS***

Metabolism, 9: 1111-1117, December 1960

S^{35}-labeled chlorpropamide was used in vitro and in vivo to investigate serum protein binding. When chlorpropamide and pooled normal serum were dialyzed against phosphate buffer at pH 7.6, about 80% of the chlorpropamide remained bound to serum protein. Electrophoresis showed that albumin was the serum protein fraction responsible for the binding. When dialyzed with albumin both within the dialysis sac and in the dialysate, chlorpropamide distributed itself according to the relative albumin concentrations. In patients with serum protein levels ranging from 1.67 to 3.93 gm.%, serum chlorpropamide levels correlated well with total vascular albumin. When chlorpropamide concentrations in serum and edema fluid were determined simultaneously, the serum level was 2 to 6 times that in edema fluid. Although in previous studies no chlorpropamide was found in red blood cells, there is some evidence that the drug may be distributed intracellularly.

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Incorporation of Radioactive Phosphate Into Organic Phosphates of Tocopherol-Deficient and Control Rabbit Muscle

Y. F. MASTERS,* P. C. JOHNSON,** W. H. MOSLEY,*** P. B. McCAY,**** and R. CAPUTTO*****

Am. J. Physiol. 199: 295-298, 1960

Control and vitamin E-deficient rabbits were compared in their ability to incorporate intravenously injected radioactive phosphate into muscle intracellular organic phosphate. Vitamin E-deficient dystrophic muscle received inorganic phosphate from the extracellular fluid at a higher rate than did the control. Specific activity ratios showed that a smaller portion of this phosphate was converted into organic phosphate, making it appear that dystrophic muscle is less efficient than the control. Evidence is presented suggesting that at least two inorganic phosphate pools may exist in muscle cells.

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**Radioisotope Laboratory, Methodist Hospital, Houston, Texas.
***Resident, Johns Hopkins.
****Assistant Professor of Research Biochemistry.
*****Professor of Research Biochemistry.

Coronary Blood Flow Measured by a Surface Counting Technique

DAVID D. SNYDER,* G. SEVELIUS,** P. C. JOHNSON,*** and GILBERT S. CAMPBELL****

Surgery, Gynecology and Obstetrics, 3: 371-375, Sept. 1960

The time activity curve registered precordially has been shown to be composed of three separate peaks. The first two of these peaks represents the passage of the radioactive bolus through the right and left chambers of the heart. The third of these three peaks appears to represent coronary circulation. The evidence for this is that this peak is not present when the radioactive tracer bolus is excluded from the coronary circulation, that on the average this peak starts simultaneously with the appearance of the radioactivity in the peripheral circulation, and that on the average this peak ends before the beginning of the earliest recirculation of the tracer bolus.

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**Department of Medicine, University Hospital.
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****Professor of Surgery.

Inhibition of Gastric Secretion in the Rat by Normal and Abnormal Human Gastric Juice

RENE MENGUY,* and WILLIAM O. SMITH**

Proc. Soc. Exptl. Biol. Med. 105: 238-239, 1960

Intravenous administration of dialyzed, lyophilized gastric juice from normal subjects, patients with peptic ulcer and patients with gastric carcinoma, induced pronounced depression of secretion of hydrochloric acid and water in the pylorus ligated rat. Peptic ulcer juice had the greatest inhibitory effect, whereas gastric carcinoma juice had the least.

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**Assistant Professor of Medicine.

Mechanism of Inhibition of Gastric Secretion in the Rat Following Bile Duct Ligation

RENE MENGUY* and EDWARD KOGER**

Proc. Soc. Exptl, Biol. Med. 101: 666-668, 1959

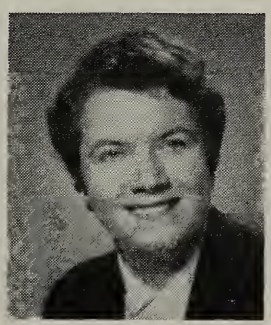
Gastric secretory activity (volume and free HCl concentration) in the pylorus ligated rat is inhibited by bile duct ligation. This is not due to removal of bile from the intestine but appears to be due to increase in level of circulating bile constitutients, particularly bile salts, resulting from obstruction to the outflow of bile from the liver.

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**Research Assistant.

FACULTY NEWS



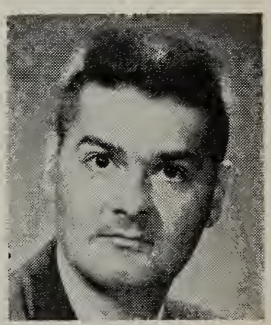
DUBOWSKI



MOORE



KNOX



GEYER

Regents Make Four New Appointments

Kurt M. Dubowski, Ph.D., University of Florida, has been appointed director of Clinical Chemistry and Toxicology Laboratories at University Hospitals and associate professor of clinical chemistry and toxicology in the Department of Biochemistry effective September 1.

Doctor Dubowski heads the clinical laboratories and is an associate professor at Florida, where he also serves as chairman of medical technology. He received his Ph.D. at Ohio State University in 1949.

The appointment is one of several recently approved by University Regents.

Others named to full-time post were:

Joanne I. Moore, Ph.D., assistant professor of pharmacologyy; Gaylord Shearer Knox, M.D., assistant professor of radiology; and Robert W. Geyer, M.D., instructor in radiology.

Doctor Moore completed her doctoral work at the University of Michigan in 1959 and has been a fellow in pharmacology at Emory University since that time.

Doctor Knox, radiologist at the U.S. Army Hospital, Fort Sill, will join the faculty in August. He was chief of radiologic services at the army hospital in Bad Cannstatt, Germany, two years before going to Fort Sill this spring. He is a graduate of Tulane University School of Medicine. The new radiology instructor, Doctor Geyer, came here from the University of Arkansas Medical Center, where he completed his residency training this summer. He is an Arkansas medical graduate.

News

News of Legislative Progress, and a Tip of the Hat to those Responsible.

Three Legislative Plums for Medicine

Oklahoma's legislative marathon, the 28th session of the state legislature, broke camp on July 29th after enacting nearly four hundred laws out of more than one thousand bills in the hopper.

Among the new laws were three significant milestones in medical legislation: Senate Bill 291, authored by Senator Yates Land of Tulsa, granting civil immunity for any acts or omissions associated with rendering professional care at the scene of an emergency; Senate Bill 81, authored by Senator Charles Wilson of Sayre, establishing a Board of Unexplained Deaths and creating a medical examiner system to investigate such deaths; and, Senate Bill 399, originally authored in the House (HB 1024) by Representative Bryce Baggett of Oklahoma City, enabling professional men to incorporate the business aspects of their practices.

These proposals carried the official stamp of approval of the Oklahoma State Medical Association and were actively supported by association representatives as the bills were led and sometimes pushed by their authors through the law-making processes.

Highlights of the new laws are outlined below, in order of their legislative approval.

Senate Bill 291

It has become increasingly hazardous in recent years for a physician to stop at an accident site and render first aid to the injured. Physicians who did so had no control over the future course of care and were often held liable for their acts.

With his "Good Samaritan" law, Senator Land hopes to alleviate the risks involved in Oklahoma by relieving the physician of any civil liability for anything he does or does not do in rendering first aid under austere, emergency conditions. In such a situation, when the doctor does not voluntarily take complete charge of the patient, an interpretation of the new law indicates that the doctor-patient relationship is not assumed and the doctor has no more responsibility than that of a layman.

Senate Bill 81

Covered elsewhere in this *Journal* (editorially by Doctor Russell, page 428), Senate Bill 81 is the realization of one of the most sought after pieces of legislation in OSMA history. It was successfully fought through by Senator Wilson after similar bills had failed in previous legislative sessions.

In brief, the "unexplained death" bill was designed to supplant the antiquated coroner's court with a more scientifically sound system of state and county medical examiners. It is effective January 2, 1962.

A Board of Unexplained Deaths, comprised of the Director of the State Bureau of Investigation, the State Commissioner of Health and the O.U. Medical School Dean, is created to assume overall responsibility for the program. It will establish rules and regulations and appoint a qualified pathologist to serve as State Medical Examiner. The state examiner shall, in turn, appoint county examiners to four year terms.

How It Works

The following types of human deaths shall be investigated by the county medical examiners in cooperation with law enforcement officials: violent deaths; sudden deaths of apparently healthy persons, when the cause is not readily recognizable; deaths under suspicious, unusual or unnatural circumstances; and deaths from diseases which menace public health.

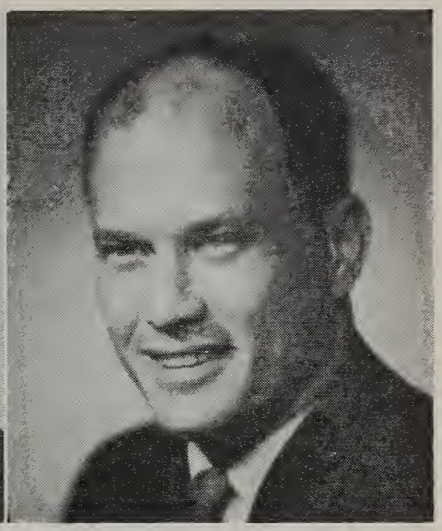
A county examiner, upon being notified, will immediately investigate such deaths and report his findings to the State Medical Examiner on forms provided. If he is not satisfied as to cause of death, he will tele-



Yates Land
GOOD SAMARITAN



Charles Wilson
MEDICAL EXAMINER



Bryce Baggett
CORPORATIONS

phone or telegraph the state examiner, who is empowered to conduct further investigation, including autopsy.

If written authorization for an autopsy cannot be obtained from the deceased's spouse or relatives, the county attorney, District or County Courts may provide authorization. The findings of an autopsy will be furnished to officers conducting the criminal investigation of the case.

The act contained no appropriation for financing the office of State Medical Examiner. Instead, it provides that a staff member of the medical school shall serve in this capacity, with compensation and expenses provided through the school. Also, the act specifies that other necessary expenses shall be covered from appropriations of the State Bureau of Investigation and the State Department of Health.

Senate Bill 399

Representative Baggett narrowly missed getting the Professional Corporation Act passed when he initially introduced it in the House as H.B. 1024. When the measure was snagged on a parliamentary point, he sought the help of Senator Charles Wilson of Sayre, who re-introduced it in the Senate as S.B. 399. Baggett and Wilson, with the help of Senator Denzil Garrison of Bartlesville, and others, successfully guided the bill to legislative approval.

One of the objectives of the act is to provide tax equity to professional men, by permitting them to incorporate the business aspects of their practices. Most tax benefits arise because the physician is considered an "employee" of his own corporation. Physicians, osteopaths, chiropractors, podiatrists, optometrists, veterinarians, architects and attorneys are eligible.

Professional men may incorporate by filing Articles of Incorporation with the Secretary of State. These corporations may only be established for the purpose of rendering one specific type of professional service, with the further proviso that only one principal office may be maintained.

All shareholders of the corporation must be duly licensed in their profession, and the practitioners are still held responsible for their professional acts. These provisions make the act ethically acceptable by American medicine.

Profits and Pitfalls

Representative Baggett, an Oklahoma City tax attorney, expresses pride in offering the tax benefits and other advantages to the professions, but cautions against arbitrary conversion to corporate status without having sound legal counselling.

"Through the Professional Corporation Act, we sought to give professional persons the advantages of the corporate form of business," Baggett said, "and I would be extremely disappointed if it was misused to the detriment of someone it was designed to benefit."

On the profit side of the ledger, the big news to physicians is the tax benefits to be derived. Pertinent tax opportunities, as reported by Baggett, are:

1. *Pension and Profit Sharing Plans.* Through the corporation a physician can invest, *tax free,* up to 15% of his professional income in a qualified retirement plan. The retirement fund is invested and the investment income is tax free. Upon retirement, the physician receives this fund in installments at much lower tax rates—or he can take it in a lump sum at capital gains rates. If he dies and his part of the fund goes to a named beneficiary, there is no estate tax.

2. *Life Insurance.* The professional corporation may purchase group life insurance, payable to any beneficiary designated by the physician. The premiums are deductible by the corporation and are not taxable to the physicians.

3. *Wage Continuation Plans.* The corporation can pay the physician's regular compensation while he is disabled. Payments are deductible by the corporation—and up to $100.00 a week is tax free to the physician.

4. *Medical, Accident and Disability Insurance.* Group medical, accident and disability insurance premiums are deductible by the corporation and are not taxable to the physician.

5. *Death Benefits.* Upon the death of a physician, the corporation can deduct up to $5,000.00 paid to his widow as a death benefit. The widow receives the payment income tax free.

6. *Repurchase of Interest on Death or Retirement.* Upon a physician's retirement, the professional corporation may redeem his stock. The physician would receive capital gains treatment. Upon a physician's death, the corporation can repurchase his stock at current value and there is no capital gains tax.

7. *Double Taxation Avoided.* If there are ten or less shareholders in the professional corporation, they may elect to have its income taxed to the shareholders, after making the deductions described above. This avoids the double taxation of corporate income.

Other advantages include freedom from the joint liability of co-practitioners. Physicians will only be liable to the extent of their corporate investment in the case of litigation against others.

Burton Named To High AMA Post

A past-president of Oklahoma State Medican Association, John Flack Burton, M.D., was elected Chairman of the American Medical Association's Council on Medical Service during the AMA's annual meeting, held June 25-30 in New York.

The Oklahoma City plastic surgeon steps into the role with an extensive background of experience in organized medicine. In addition to being state president in 1957, he has served Oklahoma in the AMA House of Delegates.

Doctor Burton has been a member of the Council, a powerful division of the AMA, since 1956. During his first year, he assumed the chairmanship of the Council's Committee on Indigent Care. In the latter capacity, he has taken part in many regional conferences on aging, has been appointed to the Medical Advisory Committee of the Department of Health, Education and Welfare's Bureau of Public Assistance, and has been active in the AMA's program for implementing the Kerr-Mills legislation.

The Committee on Indigent Care has recently produced two major publications: "Guides for Drug Expenditures for Welfare Recipients" and "Financing Medical Care for the Aged."

Since 1959, Doctor Burton has served as a member of the Tripartite Liaison Committee between the AMA, the American Hospital Association and the American Nursing Home Association, a group concerned with institutional care of the chronically ill and aged.

Big Job

The Council on Medical Service was created in 1943 as a standing committee of the House of Delegates. It was initially responsible for the coordination of all AMA medical care activities, the improvement of public relations, and the establishment of liaison with the nation's capitol.

Since its beginning, however, new AMA departments were created for public rela-

tions and legislation, and the Council began developing a more comprehensive program in the medical care field. It still remains as one of only four committees which report directly to the House.

The Council is presently comprised of committees on Medical Facilities, Indigent Care, Maternal and Child Care, Federal Medical Services, Aging and Insurance and Prepayment Plans. As Council chairman, Burton will be in charge of more than 45 physicians who serve on these committees, and will serve himself as an ex-officio member of these groups.

He will also become a member of the House of Delegates, though without voting privileges.

Current Activities

The Council and its committees are engaged in a greater variety of activities than any other AMA division. Among those of current interest are: Physician-Hospital Relationships; Expansion and Improvement of Voluntary Prepayment Plans (both Blue Shield and private insurance carriers); Group Practice; Aging; Physician Placement Service; Veterans Medical Affairs; Perinatal Mortality and Morbidity; Nursing Home Care; Medicare and the Federal Employees Health Benefit Act; and, Insurance Programs, such as professional liability, disability and major medical plans.

Future Plans

According to Doctor Burton, the Council will direct its future efforts toward keeping abreast of changing trends in the economic and social aspects of medical care.

"We will continue to work toward improved relationships between physicians and other organizations," he said, "trying to bring about educated understanding from both sides of any issue." He predicted that the impact of labor and government will create a constantly changing picture in the provision of medical care. "The Council will be continually developing guidelines," Burton said, "whereby physicians can work as effectively as possible without permitting a deterioration in the quality of medical care."

Phelps Leads Aces, Deuces



Shown congratulating Doctor Phelps (left) is outgoing President of the Aces and Deuces, Charles J. Ashworth, M.D., Providence, Rhode Island.

Malcom E. Phelps, M.D., El Reno, was elected President of the Aces and Deuces organization during the American Medical Association's 1961 annual meeting in New York.

Aces and Deuces was formed nearly a decade ago by Delegates, Alternate Delegates and Executive Secretaries of state medical societies which were entitled to only one or two representatives to the AMA House of Delegates. The purpose of the organization is simply to enable small state societies to band together socially and thereby be in a position to entertain the AMA's full House of Delegates.

Larger states routinely maintain elaborate hospitality suites at AMA meetings, and several of them singularly sponsor luncheons and receptions for the House of Delegates. To repay such courtesies and to provide the financial wherewithal to host the Delegates, the Aces and Deuces was born.

Doctor Phelps succeeds Charles J. Ashworth, M.D., Providence, Rhode Island. The present secretary-treasurer is Frank J. Holroyd, M.D., Princeton, West Virginia.

The honor bestowed upon Doctor Phelps is only the most recent of many other awards of recognition, including the presidency of the American Academy of General Practice. He is presently serving the Oklahoma State Medical Association as Delegate to the A.M.A.

Endocrine Society Honors Turner

Henry H. Turner, M.D., Oklahoma City endocrinologist, was recently honored at the 43rd Annual Session of the Endocrine Society which was held at the Hotel Biltmore in New York City.

Vice-President of this international group of some 1,300 members in 1937-38, and a member of the Council from 1938-41, Doctor Turner has served as Secretary-Treasurer of the organization since 1941.

The special award, second ever made by the society, included a certificate of recognition which read in part ". . . . for outstanding contributions to the advancements and dissemination of knowledge of endocrinology and especially in appreciation of his great labors on behalf of the Endocrine Society." In addition, he was presented a leather-bound testimonial of over 100 letters of regard and appreciation from members and friends all over the world.

Long active in medical circles, Doctor Turner served as President of the Oklahoma State Medical Association in 1940-41.

In 1959, he was named the Schering Scholar for his outstanding contributions to the field of endocrinology.

The same year, he was installed as President of the National Society of Nuclear Medicine, a world-wide organization with a membership of over 1,200 physicians, dentists, engineers and scientists who represent all areas of the United States as well as eight foreign countries. The purpose of the group is to develop and exchange scientific information in the field of nuclear medicine and to promote research and clarify understanding of related problems.

Among other past honors, Doctor Turner is a former member of the Council of the Southern Medical Association and has held the Presidency of the American Therapeutic Society and the Vice-Presidency of the American Goiter Society. In addition, he was awarded an honorary membership in the National College of Surgeons of Brazil.

Russian Medics to Invade State Fair

Promoters of the Oklahoma State Fair, scheduled for Oklahoma City, September 23-30, recently announced that the Soviet Union will present a huge medical exhibit on Russian medicine.

Arranged through the Cultural Exchange Program of the U.S. Information Agency, the exhibit will cover 5,000 square feet of a fairgrounds building which is labeled "Miracles of Modern Medicine." While few details of Russian plans are available at this time, it is expected that some thirty-five Soviet physicians will staff a display of the latest in Iron Curtain gadgetry.

Russia selected the Oklahoma Fair as one of several exhibit sites allocated to them across the United States. Future cultural exchange plans call for sending an American medical exhibit into Russia.

OSMA to Host

In lieu of preparing a similar and perhaps competing medical exhibit at the fair, the Executive Committee of the Oklahoma State Medical Association elected to propose a tour of Oklahoma's health care facilities for the Russian doctors. Plans are underway to contact the Soviet Union, through proper diplomatic channels, inviting the physicians to stay a day or two extra in Oklahoma as the guests of the OSMA.

If the invitation is accepted, a chartered bus tour will be arranged, whereby the Russians will be able to see the University of Oklahoma School of Medicine, the Oklahoma Medical Research Foundation, various Oklahoma City and out-of-town hospitals, and even browse through private physicians offices.

A group of Oklahoma City physicians is reported to be considering the coordination of a medical display, to be erected in the same building with the U.S.S.R. While the Oklahoma State Medical Association does not plan to sponsor such an activity, a spokesman for the Executive Committee said the OSMA believed its "educational tour" for the Russians would be an effective complement to a fairgrounds exhibit.

Proceedings of the 55th Annual Session of the House of Delegates

of the

Oklahoma State Medical Association

CLOSING SESSION

The Closing Session of the 55th Annual Meeting of the House of Delegates of the Oklahoma State Medical Association was called to order by the Speaker of the House, Marshall O. Hart, M.D., at 8:25 p.m., on May 7, 1961, in the Pompeian Court of the Mayo Hotel, Tulsa.

The Credentials Committee reported a quorum present.

Doctor Wilkie D. Hoover, Chairman of the **Reference Committee on Legislation and Public Policy** gave the following recommendations concerning resolutions referred to the committee for consideration:

RESOLUTION NUMBER 2: (Copy attached)

Upon the recommendation of the reference committee, it was moved and seconded that this resolution be temporarily rejected. The motion carried.

RESOLUTION NUMBER 10: (Copy attached, as approved)

The reference committee recommended that the fourth paragraph of this resolution be amended to read "BE IT RESOLVED, that the Legislative Committee of the Oklahoma State Medical Association be directed to support Senate Bill 291." The committee further recommended that the last paragraph of the resolution be deleted.

It was moved and seconded that the resolution be adopted as amended by the reference committee. The motion carried.

RESOLUTION NUMBER 11: (Copy attached)

Upon recommendation of the reference committee it was moved and seconded that this resolution be adopted as read. The motion carried.

RESOLUTION NUMBER 15: (Copy attached)

Upon recommendation of the reference committee it was moved and seconded that this resolution not be adopted. The motion carried.

RESOLUTION NUMBER 16: (Copy attached)

Upon Council recommendation, and that of the reference committee, it was moved and seconded that this resolution be adopted. The motion carried.

RESOLUTION NUMBER 17: (Copy attached)

Upon recommendation of the reference committee, it was moved and seconded that this resolution be adopted. The motion carried.

RESOLUTION NUMBER 18: (Copy attached)

After a lengthy discussion as to whether or not one state association has the right to oppose the rights of another state association's establishing its own policies, **it was moved and seconded that this resolution be rejected. The motion carried.**

Doctor E. C. Mohler, Chairman of the **Reference Committee on Constitution and By-Laws,** gave the following recommendations concerning resolutions and amendments referred to the committee for consideration: (Amendments are attached, as approved)

AMENDMENT NUMBER 1:

Upon the recommendation of the reference committee, it was moved and seconded that this amendment be made in the constitution and by-laws. The motion carried.

AMENDMENT NUMBER 2:

Upon the recommendation of the reference committee that the word "President" be revised to read "President-Elect," and that the amendment be approved with this one revision, it was moved and seconded that the revised amendment be approved. The motion carried.

AMENDMENT NUMBER 3:

Upon recommendation of the reference committee, it was moved that this amendment be made in the constitution and by-laws. The motion was duly seconded and carried.

AMENDMENT NUMBER 4:

Upon recommendation of the reference committee, it was moved and seconded that this amendment to the constitution and by-laws be approved. The motion carried.

AMENDMENT NUMBER 5:

Upon recommendation of the reference committee, it was moved and seconded that this amendment to the constitution and by-laws be approved. The motion carried.

AMENDMENT NUMBER 6:

Upon recommendation of the reference committee, it was moved and seconded that this amendment to the constitution and by-laws be approved. The motion carried.

AMENDMENT NUMBER 7:

Upon recommendation of the reference committee, it was moved and seconded that this amendment to the constitution and by-laws be approved. The motion carried.

AMENDMENT NUMBER 8:

Upon recommendation of the reference committee, it was moved and seconded that this amendment to the constitution and by-laws be approved. The motion carried.

AMENDMENT NUMBER 9:

Considerable discussion was engendered regarding the portion of this proposed Amendment No. 9 to re-

(Continued on Page 472)

American Fracture Association Plans Fall Meeting

The American Fracture Association's 22nd Annual Meeting will be held September 16 through 23 in Washington, D.C. and Williamsburg, Virginia.

Following the Board of Governors Executive meeting and registration on September 16, a one-day postgraduate course in Orthopedic Surgery and Fractures will be held on September 17 in the Gorman Auditorium, Georgetown University School of Medicine. Six hours credit, Category 1, by the American Academy of General Practice will be granted for this course. A $10.00 tuition fee will include lunch and bus transportation.

On Monday, September 18, a three-day scientific program will begin at the Shoreham Hotel. Many prominent men in the field of fractures will speak on diversified subjects. Both scientific and commercial exhibits have been planned for the physicians attending. This course is acceptable for Category 2 credit by the AAGP.

Harsha to Speak

A two-day trip to Williamsburg, Virginia for another scientific program has been arranged for September 21 and 22. Among the guest speakers will be William N. Harsha, M.D., Clinical Assistant in Orthopedic and Fracture Surgery at the University of Oklahoma School of Medicine.

Special entertainment has been outlined for the ladies attending with their husbands.

Detailed information may be obtained by writing to Milton C. Cobey, M.D., 1726 1 St., N.W., Washington, D.C.

Brown, Burton Reappointed To HEW Committee

Two past-presidents of the Oklahoma State Medical Association were reappointed in July to continue service on an important committee of the Department of Health, Education and Welfare. Walter E. Brown, M.D., Tulsa, and John F. Burton, M.D., Oklahoma City, will serve as professional consultants to the HEW's Board of Public Assistance.

Have You Heard?

JAMES R. RHYMER, M.D., a native of Leedey, Oklahoma and a graduate of Pittsburgh School of Medicine, has opened offices in the Lingenfelter-Cunningham Clinic in Clinton.

Recently appointed County Superintendents of Health are: JERRY E. KING, M.D., Holdenville, Hughes County; JOSEPH S. RAFF, M.D., Madill, Marshall County; DAVID M. EGGENBERG, JR., M.D., Davis, Murray County; ROBERT N. HONEA, M.D., Muskogee, Muskogee County; RICHARD A. CONLEY, M.D., Watonga, Blaine County; RAY E. SPENCE, M.D., Pauls Valley, Garvin County; C. W. ARRENDELL, M.D., Ponca City, Kay County; and R. H. MAYBERRY, M.D., Wewoka who will be District Superintendent of Health of Seminole and Haskell Counties.

A graduate of the University of Oklahoma School of Medicine, BILLY DALE DOTTER, M.D., has joined C. H. WILLIAMS, M.D., in partnership at the Okeene Clinic. Doctor Dotter has recently completed a residency in surgery at Mercy Hospital in Oklahoma City.

MERLE D. CARTER, M.D., an OU Medical School graduate, has joined the staff of the Waynoka Clinic.

CONRAD MARKERT, M.D., a native of Muskogee and graduate of the University of Oklahoma School of Medicine, is now associated with the Anadarko Clinic.

Southern Oklahoma group desires young general practitioner for association, leading to partnership.

Write Key B, The Journal
P.O. Box 9696
Oklahoma City, Oklahoma

Deaths

Donald W. Branham, M.D.
1900-1961

Donald W. Branham, M.D., a member of the Editorial Board of *The Journal* of the Oklahoma State Medical Association since 1958, died in Corpus Christi, Texas, June 20, 1961.

Born in Evansville, Indiana in 1900, Doctor Branham graduated from the University of Oklahoma School of Medicine in 1925. He took postgraduate work in urology at the University of Pennsylvania and Newark City Hospital, New Jersey. Except for his service as a Commander in the Navy during World War II, he had practiced in Oklahoma City since 1932.

Since 1935, he had served on the staff of the OU Medical School and was named Chairman of the Department of Urology in 1954. At the time of his death, he was Head of the Department of Urology at the Veterans Administration Hospital in Oklahoma City.

Doctor Branham was active in medical circles, having served on the American Board of Urology; as President of the Oklahoma County Medical Society in 1954; and, in addition to his place on the Editorial Board of *The Journal*, he had been Editor of *The Bulletin* of the county society.

He was a member of the American Urological Association, the Oklahoma City Urological Association and the Oklahoma Health Council.

Other activities included membership on the Oklahoma City Board of Appeals for charity organizations, organizer and Vice-President of the Visiting Nurses Association and a member of the American Medical Writers Association.

A leader in Oklahoma City's Great Books program, Doctor Branham was interested in many civic organizations, including his position as violinist in the original Oklahoma City Symphony.

Ray M. Balyeat, M.D.
1889-1961

Ray M. Balyeat, M.D., 72-year-old Oklahoma City physician, died July 2, 1961.

A native of Arkansas City, Kansas, Doctor Balyeat graduated from the University of Oklahoma School of Medicine in 1918, where he later became Associate Professor Emeritus of Medicine.

A Diplomate of the American Board of Internal Medicine, he had served as national President of the American Association for the Study of Allergy, an organization which later became the American Academy of Allergy.

Doctor Balyeat was the author of several reference books on allergies and migraines.

C. E. Calhoun, M.D.
1878-1961

Sand Spring's first doctor, C. E. Calhoun, died June 11, in Sand Springs.

Born in Greensboro, Alabama in 1878, Doctor Calhoun received his medical degree from Maryland Medical College in 1903. He came to Sand Springs in 1910 as the first physician for the Sand Springs Orphans' Home and the Sand Springs Railroad. In addition to these activities, he maintained his private practice.

A participant in both civic and religious activities, his practice was interrupted only by eighteen months service with the army during World War I.

In 1953, the Oklahoma State Medical Association honored Doctor Calhoun for over half a century of service to the medical profession with the presentation of a Fifty-Year Pin. Before his retirement in 1957, he again received tribute from the association when he was awarded a Life Membership.

Auxiliary News

Convention Impressions

Mrs. Pat Fite, Sr., our State President, reports A.M.A. convention in New York was stimulating, but swelteringly so:

"The Convention was huge, formal and impressive. The first day we voted to give $10,000 to the A.M.E.F.; $10,000 to A.M.A. for loans for education and scholarships; and $1,000 to *Today's Health*. These gifts were voted from the A.M.A. Auxiliary's unrestricted reserve fund.

"When the states gave their reports, Oklahoma was one of the two states to receive spontaneous applause. (We shall have to wait until Fall Conference to find what particular project or projects were responsible for the accolade.)

"The Memorial Service was beautiful and dignified.

"The planned entertainments were beautifully presented. The tea honoring Mrs. Mackersie and Mrs. English was held at the United Nations Building. Most of us planned our time so that we could vote first, make the guided tour of the building, then attend the tea. The luncheon honoring the Past Presidents was called 'Manhattan Serenade' and was held in the Palm Terrace at the Hotel Roosevelt."

Did You Miss A.M.A.?

Since most of us were not among the 2,500 Auxiliary members attending A.M.A., we appreciated coverage on T.V., newspapers, *Life*, and *Time*. Some one from our unsophisticated state should write an assuring note to the editorialist of *The New Yorker* comments, explaining several things: doctors *are* people—and patients were being cared for by some doctor at home. Maurine said Dr. Fite was one of the doctors "who exhibited great variety in dress and appearance" by wearing a gay madras jacket; New York obviously has not heard of the advantages of air conditioning.

Medium and Heavy

If you are already bored with the stack of "light" summer reading you saved during the winter, the current crop of periodicals will boost your interest. Don't miss the mid-July issue of the *Post*, covering the wonderful service of our Oklahoma doctors to the Jordanian area: *Doctors in the Desert.*

Each Civil Defense Chairman should recommend Major de Seversky's *America—Too Young to Die!* A condensed version is currently running in one of the state newspapers. The Major attempts to explain public apathy, and he constantly rephrases what Velma Woodward has been telling us the past two years.

One of the finest supplements ever carried by *The Atlantic* is in the July issue: *Psychiatry in American Life;* Its effect on Medicine, Writing, Religion, Art, Children, and Morals. A panel on this issue would provide a stimulating program for your Mental Health Chairman to consider. For excellent background material, we also recommend Dr. Nina Ridenour's book: *Mental Health in the United States*, a 50-year history.

For pertinent facts covering almost every field of our interests, be sure to start filing comments of Dr. Edward R. Annis, who joined the editorial staff of *Medical Economics* in July. After reading his articles, seeing him debate Walter Reuther, and listening to his excellent speech in Tulsa in the spring, many of us find him an excellent and quotable source for the many questions we are asked.

25 YEARS AGO



Articles published in *The Journal* of the Oklahoma State Medical Association, August, 1936.

Esophageal Diverticula

R. M. Howard, M.D., F.A.C.S.
Professor of Surgery, University of Oklahoma

The first mention of an esophageal diverticulum which appears in the literature was made by Ludlow in 1746, when he described what we now term a pulsion diverticulum of the esophagus. Rokitansky in 1840 divided esophageal diverticula into the pulsion and traction types.

The pulsion type, the one which we are attempting to discuss, is not a true diverticulum, but rather a herniation of the mucous, and submucous coats. Killian and Keith have demonstrated that they originate between two definite parts of the inferior constrictor muscle, i.e. between the transverse lower constrictor fibers, and the circular or oblique fibers of the constrictor inferior pharyngis muscles that go to make up the criopharyngeous muscle. While this statement is usually accepted, there has recently been evidence produced showing that this may be incomplete.

The traction type of diverticula are true diverticula in that the sac contains all of the coats of the esophagus. They occur almost always in the thoracic portion of the esophagus and result from cicatrical contraction of inflamed lymph glands, which by true traction pull the walls of the esophagus outward, causing a diverticulum of varying size to develop. They usually are small, transverse in relation to the esophagus, and cause but little trouble, as the neck of the sac is rarely narrow, and because the walls contain the muscular coats of the esophagus they tend to empty readily.

Two other types have been described, a congenital type which is related to branchial fistula, and a lateral diverticulum described by Moynihan which arises from a gap below the borders of the cricopharyngeus and the fibers of the esophagus. These two types are very rare.

The pulsion type of diverticulum, with which we are at present particularly interested, is entirely different from the others. It is sometimes called, because of its origin, a pharyngo-esophageal diverticulum. Its site of origin is almost a fixed point. Its progress is constant, and its anatomy and relation to surrounding structures varies but little. It occurs probably more frequently than we realize; two hundred and seventy-six cases are reported at the Mayo Clinic prior to 1933; thirty-five are reported by Lahey, and seventy-nine reported by Shallow from the Jackson Clinic. It is more frequent in men than women, about five to one. It is observed usually between fifty and seventy years of age, but may be found earlier in life. The youngest in our series was sixty-five and the oldest seventy-eight years.

TO SUMMARIZE

The age incidence of our cases were 67-73-78-74-77-65. Average age 72.3 years. Symptoms were present from four months in one case to twelve years in another. The average time symptoms were present was 4.33 years.

The symptoms conformed to the first stage in one case; to the second stage in one case and to the third stage in five cases. Two of these cases had gone into extreme dehydration and starvation.

The five cases operated made uneventful recovery without complications, and were entirely relieved of the distressing condition.

Letter to The Editor

The Editorial Board
Gentlemen:

I have reviewed with great interest the May 1961 issue of the *Journal* of the Oklahoma State Medical Association which has been devoted in its entirety to the subject of disaster medical care. Because of its completeness in full coverage of all aspects of disaster preparedness, I am confident that it will become a valuable resource document for State and local medical associations in their planning for health mobilization activities.

We are grateful for the opportunity afforded Mr. Jerrold M. Michael, Chief, Training Branch of our Division of Health Mobilization, to contribute to this issue the paper on "Continuing Education in Health Mobilization."

The Editorial Board of the *Journal* and its staff, as well as the officers of the Oklahoma State Medical Association, are to be complimented on their fine contribution to the literature in this most important field of medicine.

Sincerely yours,
LUTHER L. TERRY, M.D.
Surgeon General

PHYSICIAN PLACEMENT

Anesthesiology

Richard S. Dillman, M.D., 529 Fifth Street, Ann Arbor, Michigan; age 35; married; University of Michigan, 1956; board eligible.

General Practice

George Rosenthal, M.D., John Peter Smith Hospital, Fort Worth 4, Texas; married; University of Arkansas Medical School, 1960; available immediately.

Leonard W. Rozin, M.D., 2740 N.W. 21st St., Oklahoma City; age 33; married; University of Kansas, 1959; now completing general practice residency at University Hospital; desires association in Oklahoma City; available July 1, 1961.

John Richard Smith, M.D., U.S.A.F. Hospital, APO 633, New York City, New York; age 29; married; University of Oklahoma School of Medicine, 1957; available September, 1961.

Irving Teague Staley, M.D., 4207 Givens Avenue, Memphis 17, Tennessee; age 32; married; University of Tennessee, 1960; available July 1, 1961.

Joe Allen Stewart, M.D., Box 337, Fountain Inn, South Carolina; age 36; married; University of Oklahoma, 1949; available immediately.

E.E.N.T.

August L. Stemmer, M.D., 20th Station Hospital, APO 696, New York, N.Y.; age 32; married; Harvard Medical School, 1953; board certified; Available May 1, 1961.

Industrial

A. G. Dandenault, M.D., 735 Lundvall, Rockford, Illinois; age 60; single; University of Manitoba Medical College, 1926; prefers general practice with some surgery; available immediately.

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available immediately.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

James Stanford Haimsohn, M.D., 3340 Poplar Avenue, Memphis, Tennessee; age 43; married; University of Tennessee, 1942; board certified: available 90 days.

Donald Sinton Hall, M.D., 8283 Marlow, Detroit 28, Michigan; age 33; married; University of Cincinnati, 1955; available August, 1961.

Allen Bert Malnak, 1015½ Brown Street, Evanston, Illinois; age, 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

Locum Tenens

University of Oklahoma graduate desires locum tenens during the months of August or September, 1961. Contact R. A. Yeakley, M.D., c/o St. John's Hospital, 1923 South Utica Avenue, Tulsa, Oklahoma.

University of Oklahoma graduate desires locum tenens, from mid-September, 1961 to mid-June, 1962. Contact Key A, The Journal Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City.

John B. Tipton, M.D., 326 North Ingalls, Ann Arbor, Michigan; second year of general surgery resident in Ann Arbor, Michigan; desires 3 to 4 weeks of locum tenens in Northeastern Oklahoma. Highest recommendation available.

Obstetrics and Gynecology

Philip Tabor Bennett, M.D., Quarters 739A, Maxwell A.F.B., Montgomery, Alabama; age 31; married; University of Texas Medical School, 1954; board eligible; available July 1961.

Robert Russell Fahringer, M.D., 1506 13th Street, Bedford, Indiana; age 38; married; Jefferson Medical College, 1953; board eligible; available immediately.

Richard W. Fenaughty, M.D., 95 Hart Street, New Britain, Connecticut; age 31; married; State University of New York, 1957; available July 1961.

Joseph W. Herbert, M.D., 915 North 1st Street, Temple, Texas; age 41; married; Southwestern Medical School, Dallas, 1945; board certified; available immediately.

Robert Cecil Koehn, Jr., M.D., 125 A Jupiter Street, Wichita Falls, Texas; age 33; Medical School, University of Tennessee; Board certified; available September, 1961.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

Robert B. Williams, M.D., 27 Normandy Road, Auburndale 66, Massachusetts; married; age 30; Tulane University, 1955; board certified; available July 1, 1961.

John J. Zadworny, M.D., 419 South Waccamaw Street, Columbia, South Carolina; age 30; married; University of Manitoba, 1955; board eligible; available immediately.

Orthopedics

Sheldon Roger, M.D., 1185 Holly Street, Denver, Colorado; age 31; married; Indiana University, 1953; board eligible; available July 1, 1961.

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Perry Merrill White, Jr., M.D., 3338 Tanglewood Drive, Augusta, Georgia; age 35; married; Baylor University College of Medicine, 1953; board eligible; available August, 1961.

Psychiatry

William L. Sherman, Jr., M.D., 201 East Kirby, Detroit 2, Michigan; age 38; single; Wayne State University College of Medicine, 1947; board eligible; available immediately.

Mary Eichhorn, M.D., 501 Fourth Street, Garden City, Kansas; age 38; single; University of Kansas, 1945; board certified; available immediately.

Murphy Mayo Sims, M.D., 3932 Ruskin Street, Houston, Texas; age 55; Louisiana State, 1936; board eligible; available immediately.

Preventive Medicine

Robert E. Jewett, M.D., 2820 Fairway Drive, Birmingham, Alabama; age 52; widower; Indiana University, 1934; board certified; desires administrative practice; available immediately.

Radiology

Quentin T. Brooks, M.D., 6922 Edgemoor Drive, Houston, Texas; age 40; married; Oklahoma University School of Medicine, 1953; board certified; available immediately.

Edward M. Sipple, M.D., 5935 Chinquapin Parkway, Baltimore 12, Maryland; age 40; married; University of Maryland, 1951; board eligible; available July 1, 1961.

William John Super, M.D., 55 Poplar Court #4, Buffalo, New York; age 38; Saint Louis University Medical School; board eligible; available immediately.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty, broncho-esophagology and thoracic surgery; available immediately.

David B. Dolese, M.D., 833 South Washington Ave., Holland, Michigan; age 43; married; University of Michigan, 1943; board certified; available immediately.

Charles Richard Fielder, M.D., 158 Bay State Road, Boston, Massachusetts; age 35; single; University of Arkansas, 1954; board certified; available August, 1961.

Urology

Joseph N. Ward, M.D., 480 Emory Circle, Atlanta 7, Georgia; age 35; married; University College, Dublin, Ireland, 1949; board eligible; available immediately.

MISCELLANEOUS ADVERTISEMENTS

WILL BUILD offices to suit tenant on desirable site across from new Bethany YMCA, 6708-6720 N. W. 32 St. Ample parking. Population of 50,000 surrounding area. Contact Arnold H. Yocum, 215 S. W. 8th St., Bethany, Okla. Call WH 7-7768.

PEDIATRIC RESIDENCY VACANCY at first year. Fully approved program in new two million dollar Children's Hospital in teaching medical center with University affiliation. State law requires U.S. citizenship and Oklahoma license (application could be made anytime). Stipend of $200 with full maintenance. Address inquiries to Leon Horowitz, M.D., care of Office of Graduate Education, Hillcrest Medical Center, Tulsa 20, Oklahoma.

PROFESSIONAL BUILDING for sale or lease two blocks from new Midwest City Hospital. Also, would build to suit tenant. Space for four M.D.'s. Contact Key D, The Jornal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City.

FOR SALE: Good used equipment. C. P. Taylor, M.D., 1201 East 5th, Ada, Oklahoma. FE 2-4424.

OPPORTUNITY for general practitioner in Maud, Oklahoma, population of 1,400 and 6,000 in area. Located 15 miles from Seminole Hospital and 18 miles from new Pottawatomie County Hospital with good roads to each. Town was previously staffed by two physicians. Offices and utilities are free. Contact R. M. Snelson, Phone 443 or 208, P.O. Box 1277, Maud, Oklahoma.

LOCUM TENENS DESIRED. Former Tulsan now in second year of general surgery residency in Ann Arbor, Michigan desires 3-4 weeks of locum tenum in Northeastern Oklahoma. Highest recommendation available. Reply: John B. Tipton, M.D., 326 N. Ingalls, Ann Arbor, Michigan.

PATHOLOGY RESIDENCIES AVAILABLE, fully approved 4 years (PA-CP). 700 bed hospital. 250 autopsies, 8,000 surgicals, 250,000 clinical laboratory tests. Staff of three full-time board certified pathologists. Full time bacteriologist. Full time Director of Medical Education. Radioisotope laboratory. Electron microscope available. Full maintenance (room and board) plus stipend from $200 monthly on. Apply Leo Lowbeer, M.D., Hillcrest Medical Center, Tulsa 20, Oklahoma.

55th Annual Meeting

(Continued from Page 465)

quire two-thirds majority vote to pass an amendment to the by-laws. **The motion was made by Doctor Louis H. Ritzhaupt and duly seconded that this portion of the proposed change in the by-laws be stricken. The motion carried.**

RESOLUTION NUMBER 9: (Copy attached)

Upon recommendation of the reference committee, it was moved and seconded that this resolution be adopted as read. The motion carried.

RESOLUTION NUMBER 19 (Copy attached)

Upon recommendation of the reference committee, it was moved and seconded that this resolution, written and proposed by the reference committee, be adopted. The motion carried.

Doctor Malcom E. Phelps, Chairman of the **Reference Committee on Miscellaneous Business**, gave the following recommendations concerning resolutions referred to the committee for consideration.

RESOLUTION NUMBER 1: (Copy attached, as approved)

The reference committee offered a substitute resolution for approval. **It was moved and seconded that this substitute resolution be adopted. The motion carried.**

RESOLUTION NUMBER 3: (Copy Attached)

Doctor Phelps reported that it was the opinion of his committee that this resolution was mechanically impossible, and recommended that it not be adopted.

Upon this recommendation from the reference committee, it was moved and seconded that this resolution not be adopted. The motion carried.

RESOLUTIONS NUMBER 6 and 7: (Copy attached, as approved)

The reference committee offered a substitute resolution to replace Resolutions No. 6 and 7 for approval.

It was moved and seconded that this substitute resolution be adopted. The motion carried.

RESOLUTION NUMBER 13: (Copy attached, as approved)

The reference committee recommended adoption of this resolution. However, Doctor Walter E. Brown pointed out that, as written, the resolution recommended moving the winter meeting of the AMA to different sites around the country and that this would be an expense that the resolution was intended to eliminate. Doctor Joe Duer concurred in this observation. **Doctor Brown moved that the section of the resolution referring to places of meeting be stricken. The motion was seconded by Doctor Duer and carried.** The amended RESOLUTION is submitted as corrected and as adopted by the House of Delegates.

Doctor Joe L. Duer, Chairman of the **Reference Committee on Insurance and Medical Service**, gave the following recommendations concerning resolutions referred to his committee for consideration.

RESOLUTION NUMBER 4: (Copy attached)

The committee recommended that the second resolve in the resolution be eliminated and that the word "additional" be stricken from the third resolve in the resolution. **Doctor Walter E. Brown raised the point that such a resolution was impractical at this time and moved that the resolution be postponed indefinitely. The motion was duly seconded and carried.**

RESOLUTION NUMBER 5: (Copy attached, as approved)

The committee recommended a substitute resolution. **It was moved and seconded that this substitute Resolution No. 5 be adopted. The motion carried.**

RESOLUTION NUMBER 8: (Copy attached)

Although the reference committee recommended approval of this resolution, Doctor Walter E. Brown pointed out difficulties in implementing such a resolution and the expense that would be involved if the intent of the resolution was carried out. He reminded the delegates that there is already a Liaison Committee between the Health Department and the Association for review of nursing home problems. **Doctor Brown moved that consideration of this resolution be indefinitely postponed. The motion was seconded and carried.**

RESOLUTION NUMBER 12: (Copy attached)

The recommendation of the committee was that a substitute resolution be adopted in place of this Resolution No. 12. **It was moved and seconded that this substitute resolution be adopted. The motion carried.**

RESOLUTION NUMBER 14: (Copy attached)

Upon the recommendation of the committee, it was moved and seconded that this resolution not be adopted. The motion carried.

Doctor Hart announced that the next order of business would be the election of officers. He stated that there would be no further nominations for offices in the Oklahoma State Medical Association. He explained that the Constitution provided that nominations must be made during the Opening Session of the Annual Meeting of the House of Delegates. This ruling evoked considerable discussion, but Doctor Hart did not change the ruling and referred to the particular section in the Constitution and By-Laws which provides for this procedure.

The first office to be filled was that of PRESIDENT-ELECT. Doctor J. Hoyle Carlock was nominated in the Opening Session. **It was moved and seconded that Doctor Carlock be elected by acclamation. The motion carried, unanimously.**

The next office was that of VICE-PRESIDENT. **It was moved and seconded that Doctor Peter E. Russo, nominated during the Opening Session, be elected by acclamation. The motion carried unanimously.**

Doctor Hart announced that the next office to be elected was that of DELEGATE TO THE AMA and announced the names of Doctor R. Q. Goodwin and Doctor Malcom E. Phelps as those nominated during the Opening Session. It was announced that vote would be by ballot and the Tellers were requested to come forward.

Following the vote and tabulation, Doctor Hart announced that Doctor Malcom E. Phelps was elected to succeed himself as DELEGATE TO THE AMA.

The next office to be elected was that of ALTERNATE DELEGATE to the AMA. Doctor Richard H. Burgtorf and Doctor Thomas C. Points were announced as those nominated during the Opening Session. It was announced that the vote would be by ballot and the Tellers were again requested to come forward. **When the votes had been duly accepted and tabulated, Doctor Hart announced that Thomas C. Points, M.D., was elected as ALTERNATE DELEGATE TO THE AMA.**

Doctor Charles Wilbanks, after being recognized by the Speaker, moved that the House of Delegates authorize Doctor Thomas C. Points to go to the next AMA meeting in the event that the incumbent Alternate, Doctor R. Q. Goodwin, is unable to go because of his health. The motion was duly seconded and carried.

The next order of business was the election of Councilors for Districts No. 3, 6, 9, 10 and 12. The following Councilors were elected by acclamation:

DISTRICT No. 3: Avery B. Wight, M.D., Enid; James Petty, M.D., Guthrie.

DISTRICT No. 6: E. E. Shircliff, M.D., Oklahoma City; Vernon D. Cushing, M.D., Oklahoma City.

DISTRICT No. 9: Burdge F. Green, M.D., Stilwell; F. R. First, M.D., Checotah.

DISTRICT No. 10: Thurman Shuller, M.D., McAlester (To fill the unexpired term of Doctor Paul Kernek).

DISTRICT No. 12: E. M. Gullatt, M.D., Ada; M. E. Robberson, M.D., Wynnewood.

Doctor Hart announced that the last order of business would be the recognition of new officers, and requested that they come to the front.

The 55th Annual Meeting of the House of Delegates of the Oklahoma State Medical Association was adjourned by the Speaker of the House, Doctor Marshall O. Hart, at 11:00 p.m.

REPORTED BY JUNE E. LAWRENCE

AMENDMENTS

1. Amend Chapter VIII, Section 1.00, by deleting the word "and" which appears between the words "By-Laws" and "Grievance," by replacing the word "and" with a comma; and by adding the words "and Executive Committee." to the end of the sentence.

2. Amend Chapter VIII, by inserting a new Section 8.00 and by redesignating the present Section 8.00 as Section 9.00, to-wit:

> "Section 8.00 EXECUTIVE. The Council shall appoint the members of the Executive Committee, based upon nominations submitted by the President-Elect."

3. Amend Chapter IX, Section 4.01, by replacing the clause beginning with the word "whose" and ending with the figure "$5,000.00" by the clause "who have restrictive income," and by inserting the words "any physician" between the words "or" and "who" in line five.

4. Amend Chapter IV, Section 11.00, by inserting the word "monthly" between the words "a" and "journal"; and by adding the following to the end of the sentence: "and of an annual membership directory."

5. Amend Chapter VII, Section 1.00, by adding this sentence:

> "A DIRECTORY OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, listing names and addresses of all members, and including a copy of the current Constitution and By-Laws of the Association, shall be published annually, not later than April 1st each year."

6. Amend Chapter I, Section 1.00, by inserting the words "who are" between the words "and" and "licensed"; and by adding the following sentence to the end of the section:

> "All members of component societies are required to belong to the American Medical Association."

7. Amend Chapter IX, Section 2.01, by deleting the clause beginning with the word "or" and ending with the word "reason."

8. Amend Chapter IX by deleting Section 2.02 in its entirety.

9. Amend Chapter XII, by inserting the following sentence between the second and last sentences:

> "An amendment presented at a regular House of Delegates meeting must be presented by a qualified member of the House of Delegates."

RESOLUTIONS

Resolution No. 1

Introduced By: Canadian County Medical Society
Subject: Opposing A.C.S. Action Regarding Surgical Assistants
Referred To: Miscellaneous Business Committee

WHEREAS, the American College of Surgeons has condemned the use of the referring physician in many instances; and

WHEREAS, the family physician is in the best position to understand the total background of the patient, including the current illness, the past history, as well as the social and emotional factors involved, so that he can offer valuable assistance in management of the patient and the family; and

WHEREAS, the family physician is usually well and adequately trained in surgical techniques, so that he can perform his duties as assistant in a competent manner, and thereby he is in a better position to serve his patient in future years; and

WHEREAS, the patient and his family frequently desires and expects that the family physician be present and assist in the surgery, because this promotes confidence and comfort when the patient is facing a surgical ordeal; and

WHEREAS, the Joint Commission on Accreditation

of Hospitals has set up certain standards relating to assistants at surgery;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association condemns any pronouncement which tends to interfere with the family physician and his relationship to his patients; and

BE IT FURTHER RESOLVED, that the American Medical Association should attempt, through negotiations with the American College of Surgeons, to have this organization adjust its policies to conform with the policies of the Joint Commission on Accreditation of Hospitals.

Resolution No. 2 (Rejected)

Introduced By: Tillman County Medical Society
Subject: Use of Term "Doctor"
Referred To: Legislation and Public Policy Committee

WHEREAS, the lay public in many instances is not cognizant of the difference in medical doctor, doctor of osteopathy and doctor of chiropractic and other designations of those engaged in the practice of medicine; and

WHEREAS, in many communities these differences need to be clarified; and

WHEREAS, the designations need to be further defined.

THEREFORE, BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association pass this resolution and forward it to the Legislative Committee of the Oklahoma State Medical Association for action.

BE IT RESOLVED, that the Medical Laws of Oklahoma be amended as follows: That the use of the term "Doctor" or "Physician" be permitted only by those engaged in the practice of medicine whose credits are transferable to the University of Oklahoma for the awarding of a doctor's degree.

BE IT RESOLVED, that this resolution be presented to the House of Delegates of the Oklahoma State Medical Association at the annual 1961 meeting.

Passed by the unanimous vote of the Tillman County Medical Society on December 22, 1960.

Resolution No. 3 (Rejected)

Introduced By: Tillman County Medical Society
Subject: Advance Council Report to County Societies
Referred To: Miscellaneous Business Committee

WHEREAS, the subject matter of the report of the Council of the Oklahoma State Medical Association to the House of Delegates was lengthy and tedious at the 54th session; and

WHEREAS, the full impact of the report was difficult to evaluate in the time allotted to the reading of the same; and

WHEREAS, it contains controversial issues.

THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association through its House of Delegates at the 55th meeting request, instruct, and order the Council to submit a copy of this report to the individual county societies preceding the annual meeting of the Oklahoma State Medical Association in order that the constituent societies may review this report prior to the meeting of the House of Delegates.

BE IT FURTHER RESOLVED, that this resolution be presented to the House of Delegates of the Oklahoma State Medical Association at the annual 1961 meeting.

Passed by unanimous vote December 22, 1960, by the Tillman County Medical Society.

Resolution No. 4 (Rejected)

Introduced By: Tillman County Medical Society
Subject: Abuse of Welfare
Referred To: Insurance and Medical Service Committee

WHEREAS, abuses occur in the State of Oklahoma in the Aid to Dependent Children Program and the Dependent Care Program; and

WHEREAS, the public has no voice in governing the use of its money in this matter; and

WHEREAS, some means of restraint for the benefit of our free enterprise society need to be devised to combat these abuses since the abuses endanger the mutual incentive for self-sustainment, both of the taxpayer who pays for these welfare services and the recipient who receives these welfare services.

THEREFORE, BE IT RESOLVED that the House of Delegates of the Oklahoma State Medical Association pass this resolution and forward it to the legislative committee of the Oklahoma State Medical Association for action.

BE IT RESOLVED, that the welfare laws of Oklahoma be amended as follows: That the penalty of sterilization be added with the necessary implementation for enforcement for the ADC recipients who give birth to a second child after being placed on the welfare roll because the husband has supposedly abandoned the wife or left home and for the ADC recipient who gives birth to a second child while unmarried. Failure to comply would be sufficient cause for omission from receiving assistance from the State Department of Public Welfare.

BE IT RESOLVED, that an additional amendment to the welfare laws be that a citizens committee composed of taxpaying citizens be appointed from citizens of each county, for each county, by the governor or legislators to scrutinize especially the welfare rolls of the ADC recipients quarterly, but to exclude the Old Age Assistance and the disable rolls, and make quarterly reports of those questionable cases that do not deserve or belong on the welfare rolls.

BE IT RESOLVED, that this resolution be presented to the House of Delegates at the annual 1961 meeting.

Passed by unanimous vote of Tillman County Medical Association on December 22, 1960.

Substitute Resolution No. 5

Introduced By: Tulsa County Medical Society

Subject: Opposition to Service Contracts with Insurance Carriers
Referred To: Insurance and Medical Service Committee

WHEREAS, the right of the physician to fix the amount of his fee in each individual case, based on the type and amount of service rendered and in consideration of other factors, is one of the basic tenets of the medical profession of the United States;

NOW THEREFORE BE IT RESOLVED that the Oklahoma State Medical Association is opposed to the principle of service contracts with insurance carriers; and

BE IT FURTHER RESOLVED, that the Oklahoma State Medical Association restate its complete support of the traditional privilege of the physician to fix the amount of his fee in each individual case.

Substitute Resolution for Resolutions Nos. 6 and 7

Introduced By: Tulsa County Medical Society
Subject: Proposed Increase in AMA Dues

WHEREAS, the Oklahoma State Medical Association feels that the American Medical Association should be called upon to make all possible economies; and

WHEREAS, the members of the Oklahoma State Medical Association feel that the American Medical Association should make attempts to induce all doctors to become active members of the Association; and

WHEREAS, it is necessary for the AMA to adequately represent the medical profession of this country, as well as the state and local medical societies;

NOW THEREFORE BE IT RESOLVED, that if the American Medical Association still requires finances to meet current and future demands, that the Oklahoma State Medical Association will support a necessary increase in dues so that the American Medical Association can more adequately represent the doctors of medicine, and can further medical education in the United States.

Resolution No. 8 (Rejected)

Introduced By: Tulsa County Delegation (Tulsa County Medical Society)
Subject: Proposed Study of Nursing Homes in the State of Oklahoma
Referred To: Insurance and Medical Service Committee

WHEREAS, an increasing number of aged citizens of the State of Oklahoma are now residing in nursing and convalescent homes; and

WHEREAS, it is anticipated that increased benefits of government health care programs for the aged, as well as of private insurance programs, will utilize convalescent and nursing homes to a greater degree in the future, resulting in an increasing number of such homes being established and operating; and

WHEREAS, public complaints have been heard as to conditions of sanitation, operating policies, lack of adequate medical care arrangements, overcrowding, excessive charges, failure to keep records, etc. in some nursing and convalescent homes now in operation.

NOW THEREFORE BE IT RESOLVED, that the President of the Oklahoma State Medical Association appoint a committee of members to make an intensive study of all factors relating to facilities and services offered by convalescent and nursing homes in the State of Oklahoma, compiling such information into a full and detailed report with recommendations for correction of inadequacies, establishment of desirable legislative controls, and blueprinting a liaison program with convalescent and nursing homes to assure adequate medical care for residents of such homes; and

BE IT FURTHER RESOLVED, that this study, report and recommendations shall be presented to the House of Delegates of the Oklahoma State Medical Association no later than the Annual Meeting of 1962 in Oklahoma City; and

BE IT FURTHER RESOLVED, that said study shall in no way reflect upon responsible nursing homes and convalescent homes and their operators who are presently seeking to improve standards of maintenance and operation, nor upon established government agencies entrusted with the administration of existing statutes governing the licensing and inspection of such homes.

Resolution No. 9

Introduced By: Tulsa County Delegation (Tulsa County Medical Society)
Subject: Restatement of Opposition to Corporate Practice of Medicine
Referred To: Constitution and By-Laws Committee

WHEREAS, an alarming trend toward the corporate practice of medicine in Oklahoma, both openly and through subterfuge, and the acceptance by many individual physicians of the undesirable conditions of medical practice imposed therein, has been noted with concern by responsible medical doctors; and

WHEREAS, the corporate practice of medicine is contrary to the established tenets and ethics of the medical profession, tending to exploit both physician and patient, depriving the physician of many of the basic rights of a free system of medical practice, placing the responsibility for professional decisions in the hands of unqualified lay persons in many instances, and encouraging an alien and undesirable type of medical practice of questionable motivation;

NOW THEREFORE BE IT RESOLLVED, that the Oklahoma State Medical Association restate its unqualified opposition to the corporate practice of medicine and admonish its members to adhere to principles of medical practice which shall not deprive them of their basic responsibilities and entitlements as an individual practitioner of medicine; and

BE IT FURTHER RESOLVED, That the component county medical societies in the State of Oklahoma be requested to review all situations relating to and in-

volving the corporate practice of medicine, and that open discussions of this subject be conducted at an appropriate time and place.

Resolution No. 10

Introduced By: Tulsa County Delegation (Tulsa County Medical Society)

Subject: Enactment of a "Good Samaritan" Statute by the Oklahoma State Legislature

Referred To: Legislation and Public Policy Committee

WHEREAS, Physicians rendering medical care at the scene of an emergency, in good faith, should be relieved of liability for civil damages as the result of acts of omission, lack of proper physical facilities for treatment, undesirable conditions for rendering treatment, and other acts performed under the difficult conditions surrounding an emergency; and

WHEREAS, legislation to this effect, popularly known as "Good Samaritan" laws, has been adopted in several states and is now under consideration by the legislative bodies of other states; and

WHEREAS, such legislation would be in the best interests of both the physician and patient, encouraging a fuller measure of emergency medical care;

NOW THEREFORE, BE IT RESOLVED, that the Legislative Committee of the Oklahoma State Medical Association be directed to support Senate Bill 291.

Resolution No. 11

Introduced By: Tulsa County Delegation (Tulsa County Medical Society)

Subject: Legislation to Establish a Medical Examiner System in Oklahoma

Referred To: Legislation and Public Policy Committee

WHEREAS, Senate Bill 81, now pending in the Oklahoma State Legislature, would create a State Medical Examiner System with facilities, personnel and authority to investigate deaths occurring under questionable circumstances; and

WHEREAS, this and similar proposals in the past have been officially endorsed by the Oklahoma State Medical Association as being in the best public interests through the assistance given to the enforcement of law and administration of justice;

NOW THEREFORE BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association reiterate its demand for enactment of legislation creating a State Medical Examiner System by endorsement of Senate Bill 81, requesting that the Legislative Committee follow an intense program of activity to secure the enactment of this bill in the current session of the Oklahoma State Legislature; and

BE IT FURTHER RESOLVED, that in the event Senate Bill 81 fails of enactment in the 1961 session of the Oklahoma State Legislature, that the Oklahoma State Medical Association blueprint a long-range program of legislative activity designed to secure the enactment of an acceptable Medical Examiner System statute in the 1963 session of the Oklahoma State Legislature, said program of activity to be conducted in cooperation with the various component county medical societies.

Substitute Resolution No. 12

Introduced By: Oklahoma County Medical Society

Subject: Determination of Need and Provision of Care to Those over Age 60

Referred To: Insurance and Medical Service Committee

WHEREAS, we the members of the medical profession in the State of Oklahoma feel primarily responsible for the health of its citizens; and

WHEREAS, we hold a unanimous conviction that the most effective and only proper way to discharge this responsibility is by individual and community action; and

WHEREAS, we also believe that through effective and unified utilization of existing local agencies and services no complementary or supplementary resources are needed; and

WHEREAS we acknowledge the fact that there may be citizens of our State who, in their later years especially, have unrecognized and/or unfulfilled needs for medical care; and

WHEREAS, such persons may have sought but failed to find such care within the reasonable limits of their resources; and

WHEREAS, the physician members of the Oklahoma State Medical Association feel a sincere obligation to aid in prompt and effective efforts to provide such care and satisfy such needs without creating additional financial burdens for either those in need or the resources upon which they depend for subsistence; and

WHEREAS, we assert and reaffirm our traditional oath of service to those in need without regard for stipulated remuneration;

THEREFORE BE IT RESOLVED that we the members of the Oklahoma State Medical Association do declare our desire and intent to create, promote, support and direct a Search for Medical Needy throughout the entire state of Oklahoma. The objective of this search will be to find every person aged 60 years or older who:

1. Has a need for medical care,
2. Has sought and does desire such care, and
3. Has been unable to obtain such care for whatever reason.

BE IT FURTHER RESOLVED that the Council on Socio-Economics be directed to make a study of ways and means of accomplishing this program and report back to the House of Delegates at its next meeting.

Resolution No. 13

Introduced By: Wilkie D. Hoover, M.D., Malcom E. Phelps, M.D., Joe L. Duer, M.D., R. Q. Goodwin, M.D.

Subject: Discontinuing Scientific Portion of AMA Mid-Winter Meeting

Referred To: Miscellaneous Business Committee

WHEREAS, the Board of Trustees of the American Medical Association has requested a $20 annual increase in dues for the purpose of expanding certain activities of the Association; and

WHEREAS, such an increase should be accomplished only after all reasonable economies in AMA operations are effected; and

WHEREAS, the Mid-Winter Clinical Meeting has been operating at a deficit, due to diminishing interest and attendance at the scientific sections of the meeting; and

WHEREAS, the discontinuance of the scientific portion of the Mid-Winter Meeting would result in considerable savings to the American Medical Association;

NOW THEREFORE BE IT RESOLVED, that the Board of Trustees of the American Medical Association discontinue, as promptly as is practical, the scientific activities associated with the Mid-Winter Meeting.

Resolution No. 14 (Rejected)

Introduced By: Pottawatomie County Medical Society
Subject: Appointments to Blue Cross-Blue Shield Boards
Referred To: Insurance and Medical Service Committee

WHEREAS, the relations of the Oklahoma State Medical Association and the Blue Cross-Blue Shield have always been cordial; and

WHEREAS, the public in general is led to believe that Blue Cross-Blue Shield organizations represent the medical profession; and

WHEREAS, it is considered desirable to so continue; and

WHEREAS, the Oklahoma State Medical Association is of the opinion that it should be considered proper for the Association to exercise some degree of control of personnel on the Boards, Blue Cross-Blue Shield;

THEREFORE BE IT RESOLVED, that the Council of the Oklahoma State Medical Association shall hereafter nominate members of the Blue Cross-Blue Shield Boards when, in due course of time, the appointments to these Boards shall have expired. The Council shall nominate a certain number of candidates for each vacancy, according to their discretion. The Oklahoma State Medical Association is of the opinion it is preferable that a majority of members of each Board shall be Medical Doctors, members of the Oklahoma State Medical Association.

BE IT FURTHER RESOLVED, that failure of the Blue Cross-Blue Shield to cooperate with the terms of this resolution shall produce the effect of withdrawing the active approval and cooperation of the membership of the Oklahoma State Medical Association.

Resolution No. 15 (Rejected)

Introduced By: Kay-Noble County Medical Society
Subject: Education Program—Alcoholism
Referred To: Legislation and Public Policy Committee

WHEREAS the American Medical Association accepts alcoholism as a disease that can be arrested and that should be treated by a physician in a hospital when necessary; and

WHEREAS, a wider understanding of this disease by physicians and hospital administrators is a serious obligation which demands attention; and

WHEREAS, a Medical Hospital Committee of the Oklahoma Alcoholism Council has been formed to stimulate such understanding in Oklahoma and has initiated a specific training program for the purpose of enlightening physicians in Oklahoma regarding the disease of alcoholism and its treatment procedures;

NOW THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association approve of the voluntary committee of the Oklahoma Alcoholism Council and its objectives.

BE IT FURTHER RESOLVED that, upon such approval, the Commissioner of Health of the State of Oklahoma and the President of the Oklahoma State Medical Association be delegated to use such financial facilities and other assistance of the State Department of Health which may be possible and any other such action as may be necessary to accomplish the following objectives:

1. The establishment of an alcoholism in-patient training and treatment program within University Hospital, University Medical Center, Oklahoma City.
2. The establishment of an annual post-graduate seminar on alcoholism.

BE IT FURTHER RESOLVED that the above Resolution be presented by the delegates of the Kay-Noble County Medical Society to the House of Delegates of the Oklahoma State Medical Association, at its annual meeting on or about May 6, 1961, for approval and action by the House of Deleates.

ADOPTED, by the Kay-Noble County Medical Society, at its meeting on May 2, 1961.

Resolution No. 16

Introduced By: The Council
Subject: School of Dentistry
Referred To: Legislation and Public Policy Committee

WHEREAS, we have become aware of the increasing shortage of personnel to care for the health and welfare of the rapidly growing population of the United States; and

WHEREAS, this shortage is becoming especially acute in regard to dentists in the less populous areas of Oklahoma, and is sure to spread throughout the State because of the absence of a dental school in Oklahoma; and

WHEREAS, this increasing shortage of dentists will make our problem of caring for the health and welfare of our patients more difficult;

NOW THEREFORE BE IT RESOLVED that the Oklahoma State Medical Association favors the enact-

ment of House Bill 829 as the first step toward a School of Dentistry as a necessary protection to the general health and welfare of our future patients, the citizens of Oklahoma.

Resolution No. 17

Introduced By: General Practitioners of Oklahoma County
Subject: General Practice Residencies
Referred To: Legislation and Public Policy Committee

WHEREAS, many general practice residencies offered are inadequately organized to achieve the intended end of producing physicians qualified to do high quality general practice; and

WHEREAS, the present general practice residency is frequently poorly and subordinately integrated within and among the specialty services of the hospital; and

WHEREAS, it is the duty and obligation of each medical discipline within the accepted organization of medical practice to evaluate and direct the nature and quality of the respective training and qualifications for that discipline;

THEREFORE BE IT RESOLVED, that the Council on Medical Education in Hospitals be directed to construct another pilot two-year progressive training program taking cognizance of the demonstrated defects and discrepancies of the prior program and orienting the new program to the criteria of good general practice as determined by that group most intimately involved and most adequately knowledgeable on the subject, the American Academy of General Practice.

BE IT FURTHER RESOLVED that the Delegates of the Oklahoma State Medical Association be instructed to introduce this Resolution before the House of Delegates of the American Medical Association, at its regular meeting in June, 1961.

Resolution No. 18 (Rejected)

Introduced By: E. K. Norfleet, M.D.
Subject: Merger of the California Medical Association with the California Osteopathic Association
Referred To: Legislation and Public Policy Committee

WHEREAS, it has been brought to our attention that there is a proposal for the merger of the California Medical Association and the California Osteopathic Association; and

WHEREAS, the principles of medical ethics proscribe voluntary professional associations between doctors of medicine and cultists; and

WHEREAS, only the House of Delegates of the American Medical Association can alter policy of the American Medical Association; and

WHEREAS, in the absence of a directive from the House of Delegates of the American Medical Association to its membership, and in the absence of any alternative statement from the osteopaths themselves that they no longer adhere to their original cult theories, the Oklahoma State Medical Association must assert its opinion that all voluntary professional associations with osteopaths are unethical; and

WHEREAS, the President of the California Medical Association has asserted in a national publication that the dealings of the California Medical Association in regard to the osteopathic question with the American Medical Association are confidential but that if the American Medical Association were not in accord with the program there would be no merger; and

WHEREAS, the House of Delegates of the American Medical Association has given no indication that it favored such a merger.

THEREFORE BE IT RESOLVED, that the House of Delegates of the Oklahoma State Medical Association, in Regular Session assembled in Tulsa, Oklahoma this 7th day of May 1961 oppose the approval of any merger of the California Medical Association with the California Osteopathic Association by the American Medical Association.

Resolution No. 19

TITLE: Changes in the Constitution and By-Laws

WHEREAS, the Council Reports, as of May 7, 1961, have been duly accepted and passed by the House of Delegates which authorized permanent changes in the administrative structure and nomenclature of the Oklahoma State Medical Association; and

WHEREAS, this program has now been on a trial basis for a period of two years of successful operation; and

WHEREAS, other changes in the Council Reports have been authorized by the House of Delegates on this date.

NOW THEREFORE BE IT RESOLVED that the incoming president of the Oklahoma State Medical Association instruct the standing committee on Constitution and By-Laws to rewrite the Constitution and By-Laws in compliance with the action of the House of Delegates relative to these changes authorized by the Council Reports.

BE IT FURTHER RESOLVED that these changes be submitted to the next House of Delegates for final approval or rejection.

Trademarked drugs . . .



or "drugs anonymous"?

In the field of medicine, as almost everywhere else in a free economy, the trademark concept has evolved over the years. As with most human institutions, there are some who may not consider it ideal; but it has brought about three signal benefits:

To the physician it gives assurance of quality in the drugs he prescribes—assurance backed by the biggest asset of the maker, his reputation.

To the manufacturer it gives one of the greatest possible incentives to produce new and better curative agents.

To the pharmacist it gives preparations which he can dispense with confidence.

If trademarks are done away with, a whole new setup must be created:

1. An enormously expanded, expensive system of government quality control.

2. A new system of generic nomenclature which would magically turn out names not only rememberably simple, but also conforming to the principles of complex chemical terminology.

3. Something new to fill the gap left by the elimination of the trademark incentive to produce new and better drugs.

The American system has been pre-eminent in producing and distributing good medicines. Above all it has been successful in creating new advances in therapy. In a dubious effort to provide cheaper medicines by abolishing the trade names upon which the responsible makers stake their reputations, let us beware of sacrificing this success.

This message is brought to you on behalf of the producers of prescription drugs to help you answer your patients' questions on this current medical topic. For additional information, please write **Pharmaceutical Manufacturers Association,** *1411 K Street, N. W., Washington 5, D. C.*

Coming Meetings

STATE

Sept. 10—Oklahoma Chapter, A.A.G.P., Red River Section (includes North Texas). Lake Murray Lodge, Ardmore, Oklahoma.

Oct. 23-25—Oklahoma City Clinical. Sheraton-Biltmore Hotel, Oklahoma City.

REGIONAL

Aug. 10-12—Rocky Mountain Radiological Society. Denver Hilton Hotel, Denver, Colo.

Aug. 21-25—Clinical and Research Advances in Pediatrics and Child Guidance. The Stanley Hotel, Estes Park, Colorado.

Oct. 1-4—Colorado State Medical Society. Shirley Savoy Hotel, Denver, Colorado.

Nov. 6-9—Southern Medical Association. Adolphus Hotel. Dallas, Texas.

Nov. 25-27—American College of Chest Physicians, Interim Session. Brown-Palace Hotel. Denver, Colo.

NATIONAL

Aug. 27-Sept. 1—American Congress of Physical Medicine and Rehabilitation. Sheraton-Cleveland Hotel, Cleveland, Ohio.

Sept. 28-30—American Association for the Surgery of Trauma. Drake Hotel, Chicago, Ill.

Sept. 30-Oct. 8—American Society of Clinical Pathologists. Olympic Hotel, Seattle, Wash.

Oct. 2-5—American Academy of Pediatrics. Palmer House, Chicago, Ill.

Oct. 2-6—American College of Surgeons. Conrad Hilton Hotel, Chicago, Ill.

Oct. 2-6—Postgraduate Assembly in Endocrinology and Metabolism. Bethesda, Maryland.

Oct. 23-24—American Cancer Society. Biltmore Hotel, New York City.

Nov. 4-5—County Medical Society Conference on Disaster Medical Care, Palmer House, Chicago, Illinois.

Nov. 25-27—American College of Chest Physicians. Brown-Palace Hotel, Denver, Colo.

Nov. 6-9—Southern Medical Association. Adolphus Hotel, Dallas, Tex.

Nov. 27-30—American Medical Association, Clinical Meeting. Denver, Colo.



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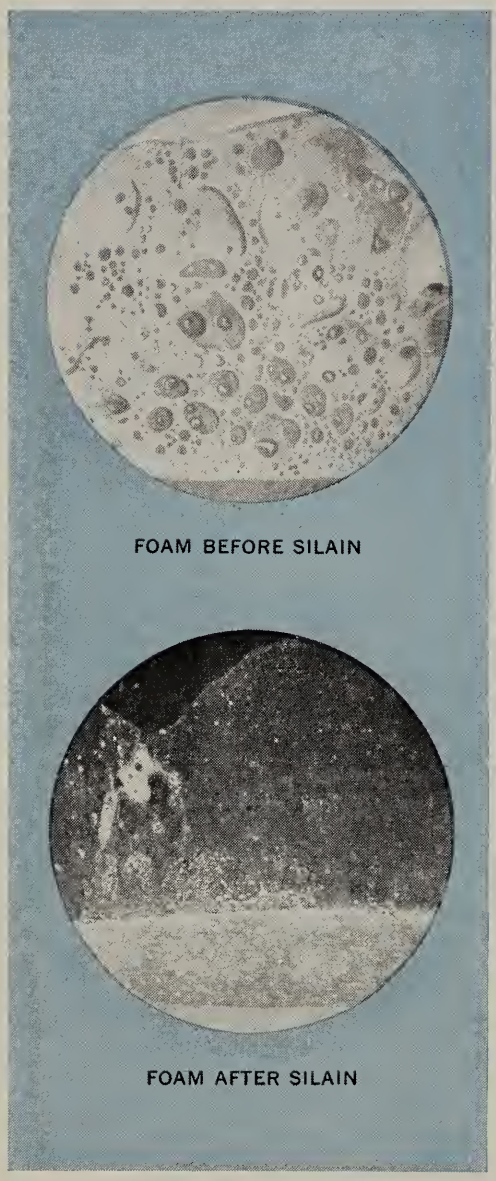
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Editorials



Donald Wilton Branham, M.D.

1900-1961

Member of the Editorial Board

With the death of Don Branham, M.D., Oklahoma medicine has lost a part of the character which has made it what it is. There are not many who contribute more than good medicine and very few whose contribution gives real character to medicine. Branham was one of these.

His thoughts and actions and words seemed to be conditioned by a genuine humility which is not definable but which seemed to stem from an appreciation of people and things that were fine in medicine, in art, in music, in religion, in science and in society. He sensed his indebtedness to all of this for what he considered the life in him and this was reflected in his active interest in the County Society, in the School of Medicine, in the University, in civic affairs, in his church and in his family.

He is succeeded on the Editorial Board by Clarence Benton Dawson, M.D., a man who has many of the attributes and much of the same motivation, and from whom the *Journal* and the Association can expect a great deal.

An Appraisal

In the 18th century, the end of which is only two lifetimes away, there were typhoid, typhus, cholera, plague, yellow fever, malaria, smallpox and a host of other diseases and infections in whose power we were. Queen Mary died in 1694 during a smallpox epidemic, and Thomas Macaulay, in discussing this event, gives a vividly-colored picture of the impact of the disease:

"That disease over which science has since achieved a succession of glorious and beneficient victories, was the most terrible of all the ministers of death. The havoc of the plague had been far more rapid; but the plague had visited our shores only once or twice within living memory; and the smallpox was always present, filling the churchyards with corpses, tormenting with constant fears all whom it had not yet stricken, leaving on those whose lives it spared the hideous traces of its power, turning the babe into a changeling at which the mother shuddered, and making the eyes and cheeks of the betrothed maiden objects of horror to the lover."

In 1707, of the fifty thousand people who lived in Iceland, eighteen thousand died of smallpox. Thirty thousand died of it in Prussia in 1796. During this century, fifteen million people died of smallpox every twenty-five years. While the number of those who died was recorded, the number left blind, crippled, or deformed was not.

During this century, the *cost of care* was little, for there was not much to be had; the *cost of sickness* was tremendous—in fear, in heartache, in disappointment in loss of earning power, in loss of potential, in waste of life itself and even loss of money; the *cost of health* to the community—no cost at all—health for the community was not available at any price.

It was at this point in history that Edward Jenner pointed out the way to prevent smallpox, and preventive medicine was born. During the early part of the 19th century, the death rate in hospitals from

childbed fever was appalling. Neither Holmes nor Semmellwies was able to persuade the obstetricians to wash their hands, or preventive medicine would have grown faster. Anethestics were introduced in the 1840's, but surgery was a gory business, followed much too often by fatal infections. In 1867, Lister properly related Pasteur's work on fermentation to putrifaction of wounds, and both surgery and preventive medicine leaped forward. But for anesthesia and the prevention of infection, the glamour boys, the surgeons, would still be behind the candy-striped poles giving shaves and haircuts with an occasional amputation, abscess opening, or bullet probing thrown in.

At any rate, toward the end of the 19th century, the *cost of care* was going up, for effective care was becoming available; the *cost of sickness* was enormous, for there was still a host of preventable diseases not yet prevented; and the *cost of health* for the community was low, for it was not yet available except for the prevention of smallpox.

By the beginning of the 20th century, the work of Pasteur, Koch and many others began to pay off. We knew how typhoid, cholera and dysentary were transmitted, and typhoid vaccine was developed. We knew that mosquitoes transmitted malaria and yellow fever, and we were destroying or making harmless their breeding places. The first Pure Food and Drug Law was passed in 1906. By the time the sulfa drugs were introduced in 1936, we were able to prevent diphtheria, tetanus and whooping cough, and communities had made available safe water, milk and food for their people.

With the advent of drugs and antibiotics for the specific treatment of infection, the emphasis has changed to individual care; the surgeons are much freer now and have developed amazing techniques and procedures for the treatment of conditions long considered hopeless. The *cost of care* has gone rapidly up, the *cost of sickness* to the community has gone rapidly down, but the most precious thing we have, and the cheapest, is community health, which is now available to the degree that we are willing to provide it, and we, of all people, have no business taking it for granted or permitting others, particularly appropriators of money for that purpose, to do so.

Cover: Journalistic Face-Lifting

Ironically, most professional medical journals are produced by journalistic amateurs, and the J.O.S.M.A. is not exceptional in this regard. What we may lack in talent and training, however, is somewhat tempered by our enthusiasm for always trying to do a better job of competing for your reading time.

Those of us who work on the magazine each month are imbued with a feeling of responsibility to produce an interesting publication; a feeling which undoubtedly arises from our recognition that the *Journal* is one association product which regularly and tangibly reaches every member across the state, and which should contribute—more than anything else—toward binding the OSMA membership together.

To achieve such an ambitious goal—by offering good reading material in a palatable form—we are not without our problems: Scientific material is always sparse in quantity, and sometimes in quality; news from most county societies is seldom available; more prestigous publications are "scooping" our coverage of national news items and attracting the works of some of our better scientific writers; and readership from the membership is not what it should be. These problems are not insurmountable, however, and we are taking an optimistic view of the future. As one step toward the revitalization of the *Journal*, we will introduce a *new look* to the publication with the October issue. The magazine format and typography will be changed throughout.

The strength and effectiveness of the *Journal* are directly related to its usefulness. Its usefulness is determined by its appeal to prospective *readers* and prospective *writers*. We hope you will find the face-lifted model more appealing to read and more readable —and that you will be struck with an overwhelming desire to contribute to it.

Remember that the *Journal* exists to serve you as a medium to exchange your information and ideas. Let's work together toward this end by welcoming our new *Journal* with increased interest and participation.

PRESIDENT'S LETTER



October will begin a new era in the history of the OSMA *Journal.* It will be a new magazine from cover-to-cover—dressed up in appearance—and even more interesting in content. This is the second time in recent years that a major overhaul has been made, indicative of our editors' interest in the continued improvement of this vital publication.

Senator Kefauver's anti-trust investigations of the drug industry have hurt all medical journals financially during the past year, because pharmaceutical houses, reacting to the purge, have curtailed their advertising budgets. The picture is expected to get somewhat brighter in the Fall, but we will have to watch it closely to stay out of trouble. The outcome of Kefauver's proposal to regulate the drug industry (S. 1552) will undoubtedly affect the future of the *Journal.*

Why, in the face of financial adversity, do we select this time for *Journal* improvement? First, because of an economic principle involved: *to retard or check falling sales by improving the product.* Secondly, we do it for the sake of a *better Journal.*

Journal advertisers (and the editors, too, I'm sure) would take great heart and more courageously defend their advertising policies if they *knew* their contributions to the state medical journals were receiving a fair amount of physician-interest.

You can help this cause, and the cause of our *Journal* in general, by *contributing* more and better material, by faithfully *reading* the magazine each month, and by offering constructive criticism. And it might not hurt to let the advertisers know how much you appreciate their support of the *Journal.*

Clinton Gallaher M. D.
President

Diagnosis and Management of the Urologic Patient in General Practice

R. J. PRENTISS, M.D. M. J. FEENEY, M.D.
R. B. MULLENIX, M.D. G. E. HOWE, M.D.

THE GENERAL MAN can diagnose accurately most urologic problems. He can treat many of them efficiently. Accurate historical review, complete physical examination, simple laboratory work, easily accomplished urologic and radiologic examinations are properly within the range of the practitioner. These will solve problems of diagnosis and plan of treatment in 90 per cent of the patients. In the others, even the urologist will have difficulty.

This discussion is not designed to be spectacular, nor filled with new or startling pearls. Accurate diagnosis and, hence, proper management have rarely resulted from rapid or intuitive thinking and action. Careful and complete historical inquiry, interpreted in the light of the physician's special knowledge of the meaning of symptoms, will indicate the diagnosis even before the physical examination. Complete and thorough physical survey, in the light of the history, usually settles the problem. Simple laboratory and radiologic procedures to be done by the practitioner will be indicated, and will help shape the final conclusion and indication for treatment.

The History

Disease of the genitourinary system may produce genital, urinary and systemic symptoms. Likewise, systemic disease can produce genitourinary symptoms. Therefore, complete knowledge of the patient is essential.

Urinary symptoms may be divided as arising from the bladder and urethra, or the kidney and ureter, but often are interrelated. In nature, they may be irritative, obstructive or neither, as is symptomless hematuria. Urinary symptoms in the female closely parallel those in the male.

Genital urology usually confines itself to the subjective genital complaints of the male. However, suburethral diverticula, tumor of the bladder or cystitis may produce female genital symptoms. The male genital history centers around sexual failures; malformations; urethral discharges; testicular swelling, pain and tenderness; and ill-defined perineal, inguinal, suprapubic and penile discomforts. Questions relative to sexual failures, hematospermia, ejaculatory pain are as important as the history of venereal or nonspecific discharges in the genital survey.

The recording of symptoms should include the frequency of urination in the day and night, the size and force of the stream, the speed and completeness of emptying the bladder, and the presence of stage voiding. This will indicate irritative or obstructive causes. Dysuria should be defined as initial, terminal, total, or as discomfort referred to

Presented by Doctor Prentiss before the 55th Annual Meeting of the Oklahoma State Medical Association, May 7-9, 1961.

the bladder and urethra unrelated to urination. Thus, discomfort due to infection or urethrotrigonitis is differentiated. The frequency should be correlated with the volume of each voiding, indicating polyuria or irritation of the bladder. Urgency with or without incontinence should be differentiated from loss of urine due to stress.

Initial and terminal hematuria arises from the bladder neck. Total hematuria suggests renal, but may be of vesical origin. Initial and terminal hematuria with terminal tenesmus indicates vesical causes associated with infection. Hematuria with clots and renal pain indicates supravesical disease. Clotted hematuria without renal pain indicates prostatic or vesical location. Symptomless hematuria suggests bladder, prostatic, or renal disease. Urethral bleeding indicates urethral or prostatic causes. Usually the latter are due to prostatitis or posterior urethritis.

Renal and/or ureteral pain is usually typical, but often is confused with musculoskeletal pain. Obstruction above the bladder produces variable degrees of pain arising in the costovertebral angle and radiating to the groin or testicle. Musculoskeletal pain may stimulate renal pain, but the latter never radiates upward from the costovertebral angle and is not influenced by positional changes. Nausea usually occurs after the onset of renal pain.

Systemic diseases may produce both genital and urinary symptoms. Cushing's disease and the adrenogenital syndrome exemplify genital manifestations secondary to pituitary and/or adrenal malfunction. Arteriolar disease with failure of urinary concentration may cause frequency and nocturia.

Physical Examination

The physical examination should include a general survey including the blood pressure, and inspection of the optic fundus in those suspected of arteriolar diseases. Percussion of the abdomen will define renal enlargements and the full bladder. Great care is necessary to localize tenderness in the kidney. Commonly, tenderness of the edge of the sacrospinalis below the 12th rib is interpreted as of renal origin, but, in fact, it has muscular-skeletal sources.

Genital survey should include specific palpation of the vas deferens, the epididymis and the testicle. The urethra can be felt throughout its course from the bladder neck to the meatus. In the female, careful inspection and palpation of the urethra will reveal the unsuspected diverticulum. No urinary complaint in the female can be diagnosed and treated without inspection of the cervix and bimanual palpation of the internal genitalia. Rectal examination should be included.

Digital palpation of the prostate settles many problems presented by the male. A normal prostate is of almond size, the Grade I enlargement like an English walnut, the Grade II the size of a small egg or golf ball, the Grade III as big as a large egg or lemon, and the Grade IV the size of an orange or larger (figure 1). Slurring of margin, undue softness or firmness suggests inflammatory change. Hardness, local nodules or fixation is suspicious of malignant change. The degree of tenderness of the prostate is not reliable; extreme reaction to palpation suggests functional hyperesthesia.

Laboratory

Necessary and helpful laboratory procedures easily within the armamentarium of general practice include: (1) routine chemical urinalysis; (2) specific gravity and pH; (3) microscopic examination of the centrifuged sediment or urethral discharges; (4) methylene blue stains of the sediment; (5) Gram stain of the sediment or discharge, if cocci are present; (6) microscopic examination of the first and second glass of urine in the male patient; (7) microscopic observation of prostatic secretion; (8) two-hour phenolsulfonphthalein excretion test; (9) blood urea nitrogen; (10) formal concentration test after Todd and Sanford;[1] (11) six consecutive daily morning and night urine tests for albumin; (12) semen examination; and (13) stone analysis.

The value of routine urinalysis is obvious. The second glass of male urine is necessary to differentiate anterior urethral from urinary infection. Methylene blue smears reveal the type of organism and help in se-

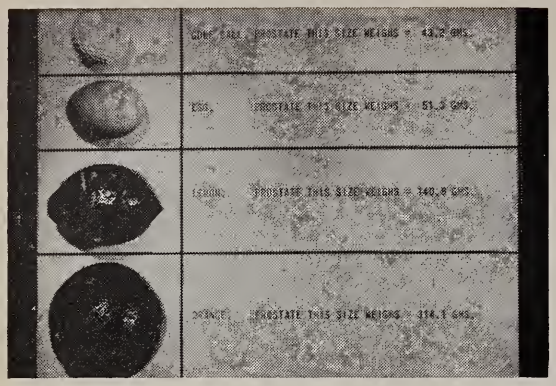


Figure 1. (left) Grading of the prostatic size by comparison with familiar objects.



Figure 2. (right) Flat film of abdomen (KUB), reveals stone near left spine of ischium, normal psoas shadow and renal outline.

lection of antiseptics; cultures are needed in resistant cases. Gram stains are needed to identify the gonococcus. Wet mount examination of prostatic secretion is simple, rapid and decides the presence or absence of prostatitis. The PSP test is simple, easily done with a simple comparator and gives an accurate index of total renal function. The concentration test requires a hydrometer only and is even more precise. The blood urea nitrogen determination is more complicated, but is well within the realm of simple laboratory technique. The six a.m. and p.m. albumin examinations will suggest or exclude orthostatic factors in the albuminuria of the adolescent.

Special Procedures

The flat film of the abdomen (KUB) delineates opaque stones, abnormalities of the renal and psoas outlines, displacement of organs and suggests the full bladder (figure 2). The excretory urogram, which is more valuable, reveals displacement, deformity and obstruction of the kidney, besides giving a partial indication of relative and total renal function. The excretory cystogram reveals diverticula, trabeculation, tumor defects and, in the oblique views, the intravesical prostate (figures 3A and 3B). A film of the bladder, after voiding, indicates presence or absence of residual urine.

Urethral catheterization, with a Number 14 or 16 French olive tip coudé rubber catheter, is simple and fruitful. In the male, the urethra should be filled with water-soluble jelly; if this is done, failure occurs only in severe urethral stricture. The catheter reveals the presence of a stricture, the residual urine, and enables one to make anterior-posterior five per cent sodium iodide cystograms and oblique air cystograms (figures 4 and 5). This allows evaluation of the bladder and prostate in obstructive problems. Air and sodium iodide are readily available.

The urethral catheter is extremely important for women presenting pyuria or bacteruria on voided specimens. Never make decisions relative to infection based on ab-



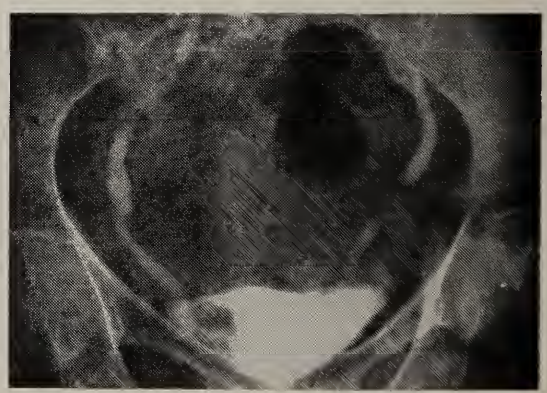


Figure 3. A. (left) Excretory urogram depicts Grade I-II irregular bladder and intravesical protrusion of the median lobe of prostate. Film made after voiding was similar. B. (right) Excretory cystogram revealing right lateral filling defect, typical of bladder tumor.

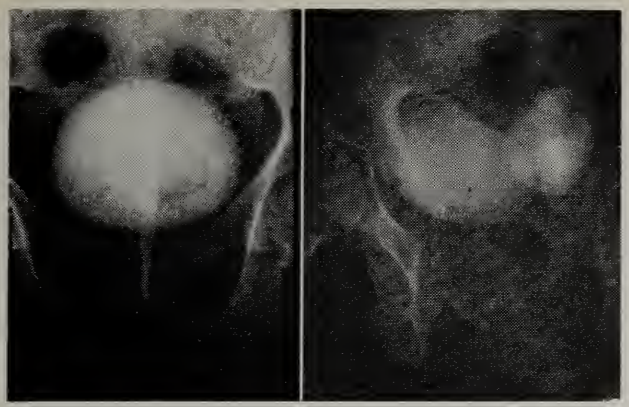


Figure 4. On the left is a normal NaI cystogram. On the right, oblique cystogram reveals a large diverticulum.

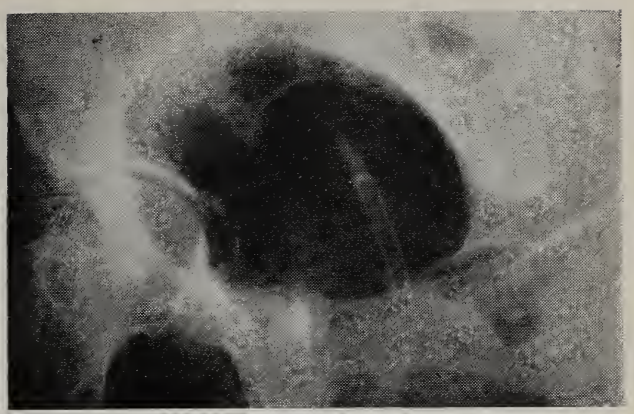


Figure 5. Oblique air cystogram reveals Grade II or more intravesical protrusion of the prostate.

normal findings in the voided female urine. Corroboration by anaylsis of the catheter specimen is necessary.

Specific Problems

The methodology presented above, applied routinely, will lead to diagnosis, plan of treatment or indication for referral. A few common problems will be discussed below.

Women: Women presenting bladder consciousness and urinary frequency with normal urine usually have urethrotrigonitis with functional aggravation. Since the condition is chronic or recurrent, excretory urograms and determination of residual urine are mandatory. If antispasmodics, sedatives, urethral dilatation, astringent instillation and irrigation do not relieve promptly, urologic consultation is wise to exclude Hunner's ulcer or other disease.

Women presenting acute dysuria, frequency, tenesmus and hematuria are seen frequently. They have acute hemorrhagic cystitis. They should respond quickly with simple antiseptics. The latter should continue for at least ten days to avoid relapse. If recurrence is noted, make excretory urograms. If still in doubt, urologic consultation is needed. Relapsing simple bacterial cystitis demands urologic investigation. Suspect traumatic causes incident to sexual intercourse, if all studies are negative.

Acute pyelonephritis is obvious, but the chronic form is not. The urine in chronic pyelonephritis may present few pus cells, but by routine staining of the centrifuged sediment one will discover bacteria. Antiseptics and frequent re-examination will prevent ultimate renal failure in these patients.

Children: Male children presenting urinary symptoms are more likely to have serious disease than female children. Girls may have repeated infection and ultimately recover without sequelae. Nevertheless, both sexes should be studied early with excretory urograms, at least, and early referral is the rule. If no obstructive disease is found in girls, urethral dilatation, voiding by the clock and consistent effort to empty the bladder will suffice. Since even urologists have difficulty in management of infection in girls, early referral is wise.

Bed-wetting in both sexes is functional in 99 per cent. However, after the fifth year, special studies are indicated to be safe, even if usual observation has suggested no abnormality.

In boys, meatal stricture should be corrected early with meatotomy, followed by bougie dilation in the 3-4 weeks healing period. Hydroceles are best treated surgically if they persist and enlarge despite aspiration. They may communicate with the peritoneum and, hence, hernia repair is needed as well. Undescended testicle should be proven by repeated examination, and observation by the parents at home. Once proven, anterior pituitary hormones should be given in the fourth or fifth year. Orchiopexy is done in the fifth or sixth year if medical treatment fails.[2,3,4]

Men: The commonest complaints presented by men are related to prostatitis in

the young and the obstructing prostate in the older man. Acute prostatitis is characterized by chills, fever, increased frequency, dysuria and hematuria. These patients should have excretory urography for confirmation and then antiseptics. They are symptomatically well in two or three days, but must be followed for 10-12 weeks. Massage is instituted after the third week and continued for 6-8 weeks or until the prostatic secretion is normal. Antiseptics are continued in reduced doses for 5-6 weeks.

Chronic prostatitis produces vague discomfort in the genital area. Since it is of long duration, careful study is necessary. Then prostatic massage, local heat, urethral sounding, and posterior instillation of one-half of one per cent silver nitrate will control the problem. Antibiotics are of no value in this condition.

Nonspecific urethral discharge and epididymitis are usually secondary to prostatitis. In the acute phase, antiseptics are indicated. To gain ultimate cure, after the acute phase, treat the prostatitis. Vasectomy or epididymectomy may be necessary in relapsing epididymitis.

Nearly all men after the age of fifty years have an enlarging prostate. Regular rectal palpation is necessary to detect early cancer. Of equal importance is the decision as to when the obstruction should be eliminated. Subjective symptoms may make the decision. However, the physician should gather objective findings by means of renal function tests, excretory urogram, cystogram and residual urine determination. The man with a benign prostate, a normal urine, good renal function, a smooth bladder on cystography, residual urine varying from 30 to 90 cc. does not need prostatectomy. On the other hand, persistent residual urine, trabeculation of the bladder, diverticula, infection or renal failure demand prostatectomy regardless of the subjective complaint.[5,6,7,8]

Ureteral Stone

This is a common problem in both sexes. Ninety per cent of all stones will pass of themselves. The doctor's job is to: (1) relieve pain; (2) check renal function and identify the stone by excretory urography (figure 7); (3) control infection; (4) wait for the stone to pass, being ready to refer on indication; and (5) prevent new stones. The indications for urologic help are (1) intractable pain; (2) uncontrollable infection; (3) absent or inadequate contralateral kidney; (4) lack of progress after 4-5 days; (5) a stone larger than 8-10 mm., making spontaneous passage unlikely; (6) persistent ileus; (7) general deterioration; (8) small but irregular stone fixed in upper or middle one-third of the ureter; (9) serious pre-existing obstruction; (10) doubt as to diagnosis; and (11) persistent non-function of the affected kidney for more than seven days. Despite this formidable list of referral indications, the doctor and patient can take comfort in the fact that 90 per cent will pass, and that, as in pregnancy, labor is necessary before delivery.[9]

Emergencies

Basic diagnostic steps are as important in



Figure 6. (left) Excretory urogram reveals caliceal dilation, blunting and irregularity typical of chronic pyelonephritis.

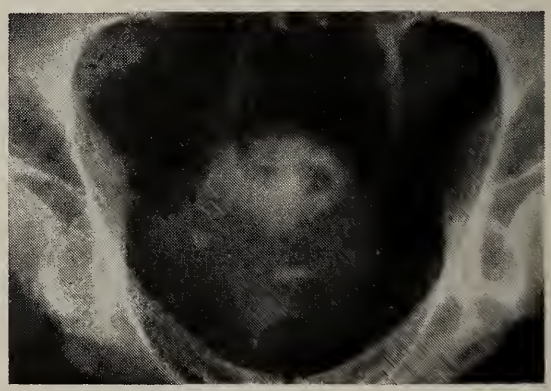


Figure 7. (right) Excretory urogram reveals dilated ureter surrounding juxtavesical ureteral stone.

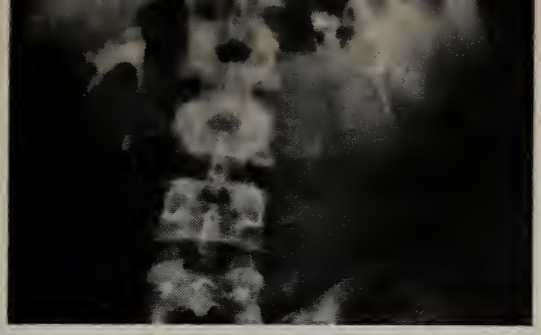


Figure 8. Excretory urogram reveals moderate injury to left kidney. Treatment is conservative with recovery.

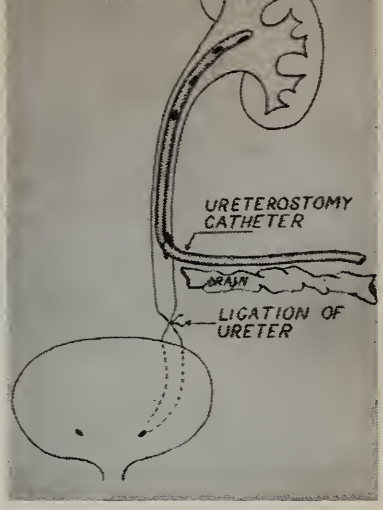


Figure 9. Schematic diagram illustrates intubated ureterostomy solving immediate problem of ureteral injury.

emergencies as in the routine problem. Renal injury may be handled conservatively with rest, antiseptics and careful observation after excretory urography has shown a normal opposite kidney and only moderate damage to the one affected (figure 8). Three weeks' rest is mandatory. Repeated excretory studies should show favorable progress. Have a unit of blood ready in case of sudden secondary hemorrhage. If there is doubt, refer immediately. Exploration of the injured kidney usually results in nephrectomy, so, if the general situation is stable, observation is proper.

The control of ureteral injury in the course of pelvic operations is a complicated problem. If the practitioner recognizes it, the principles of splinting, diversion and extraperitoneal drainage should be followed. In the operating room, the safest thing to do is to place a Number 8 French urethral catheter in the cut proximal end of the ureter and exteriorize the tube extraperitoneally through a stab incision (figure 9). This will preserve the proximal ureter for future definitive treatment. If time and the patient's condition permit, ureteroneocystostomy may be done with the long proximal segment. If the surgeon feels able, end-to-end anastomosis over a splinting catheter placed from above the union with a second ureterostomy tube for diversion is proper. If the injury is discovered late, intubated ureterostomy through a muscle-splitting extraperitoneal approach to the middle one-third of the ureter saves the kidney, and allows the patient to recover. Later, definitive repair will be conducted by the urologist.[10,11]

Rupture of the bladder occurs in pelvic fractures. It is diagnosed accurately with opaque cystograms (figure 10). In the male, this requires repair, cystostomy and extraperitoneal drainage. In the female, it requires repair, extraperitoneal drainage and urethral catheter drainage.

Rupture of the urethra also occurs in pelvic injuries. A urethrogram with aqueous organic iodide will diagnose the degree and extent (figure 11). If a catheter will pass, nothing more is needed. If not, cystostomy with retrograde catheterization is needed. If there is separation of the prostate from the urethra, cystostomy and re-establishment of continuity is necessary. The practitioner would be wise to have consultation on all but the simplest of urethral injuries.

Most injuries to the scrotum and testicle may be treated conservatively. Large hematomata should be evacuated and the injury repaired. Torsion of the testicle requires immediate operation; even then, the great majority will have to be removed. Epididymitis may simulate torsion; it is better to operate, and be wrong, than to miss a torsion.

Complete urinary retention requires catheterization. If all attempts fail to negotiate the urethra, evacuation of the bladder by

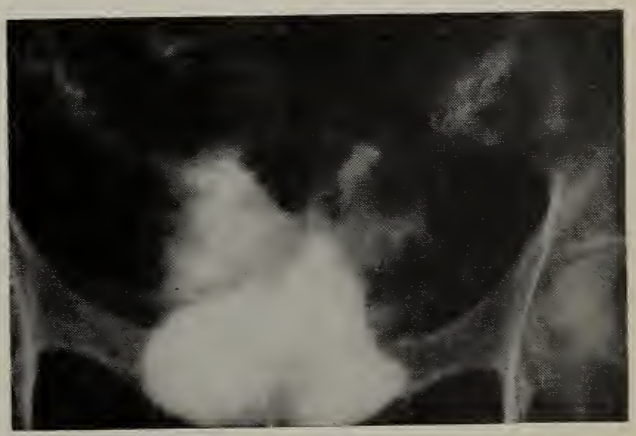


Figure 10. Sodium iodide cystogram reveals rupture of bladder with intraperitoneal extravasation.



Figure 11. Skiodan (40 per cent) urethrogram reveals rupture of membranous urethra. Bladder visualized. Catheter was passed into bladder and patient recovered.

suprapubic needle puncture is proper. If retention occurs due to hemorrhage from the prostate, place a Number 22 French catheter far into the bladder to withdraw the supernatant urine to relieve the patient. Refer to the urologist for evacuation of the clots and further study.

Common Mistakes

We have observed certain common errors committed by general men in the handling of urologic problems. Women are frequently referred because of pyuria based on examination of voided specimens. We would emphasize that pyuria in females demands catheterization for verification.

Acute prostatitis is often mistaken for urinary retention because the patient is straining to void extremely frequently. This has led to catheterization; instrumentation should be avoided in acute prostatitis. In contradistinction to this, we see men treated for infection, which they have, but which is secondary to a full bladder. Such problems demand catheterization. Examination of the abdomen differentiates between the two conditions.

Hematuria is notoriously intermittent, especially if due to malignant disease of the urinary system. Many times, patients are treated for infection because of concomitant pyuria. The bleeding stops, and the patient is happy. This cycle repeats itself until finally proper examination is obtained. Hematuria must be investigated.

Patients commonly refer to back pain as "My kidneys are hurting." Family doctors often agree with them. Most back pains in the area of the costovertebral angle are due to musculoskeletal causes. Careful history, examination and excretory urography should eliminate this error.

While we have recommended excretory urography as a good diagnostic tool for the practitioner, we would caution that one should not attempt to interpret inadequate pyelograms. They are purely screening, and any doubt should be resolved by urologic consultation.

Finally, attention to detail of urethral catheterization is often omitted, leading to failure to negotiate the urethra. We would emphasize that the urethra should be filled with lubricating jelly and a Number 14 or 16 olive-tip coudé catheter of recent vintage should be employed. If such is done, you will rarely fail.

Conclusion

We have presented the necessity of methodology in the historical review, physical examination, laboratory survey and simple radiologic examinations. We have attempted to show that all of these steps are proper and within the practitioner's orbit. Careful application will solve most problems. We have discussed many of the common conditions, and have suggested points of prime care and indications for consultation. Common sense and conscientious observation will save the patient for the practitioner, and the patient from expensive consultation.

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MAMMAPLASTY

Reduction and Augmentation

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"ALL MEN AND WOMEN are created equal"; so goes the quotation. But fortunately or unfortunately all do not develop to the same degree in the same places. Some parts of the body grow too large while others are stunted in their degree of maturation. Such is the story of the female breast. The reduction or augmenting of the breast is a procedure which is here to stay. All physicians should be familiar with the accepted techniques so they can inform their patients intelligently about them instead of having these women led astray by lay magazine articles.

History

As early as three thousand B.C. primitive corsets and brassieres were in use among Minoans to emphasize the bosom and diminish the waist. In the Christian era, the breasts were concealed beneath full flowing draperies which remained in vogue until the Crusades. By the fifteenth century tastes had again changed and the breasts of growing girls were suppressed by the use of metal plates. In western Europe the full raised bosom was again brought "to the front," so to speak, by the sixteenth century. Except for a very short "flat boyish chest" era in the nineteen twenties firm full busts serve as a starting point for fashions and have attained great esthetic value.

While many ancient cultures revealed an interest in mammary deformities, there is no early record of attempts to correct them comparable to primitive ventures into rhinoplasty. The first description of an operation for the repair of pendulous, hypertrophic breasts was Durston's.[1] On performing a mastectomy for this condition in 1669 he found "nothing but prodigious bigness." Almost two centuries lapsed before a further allusion to the subject appeared in the medical literature. In 1857 Velpeau[2] published the first systematic study of mastoptosis. From that point on interest in mammaplasty slowly but steadily increased. By the early part of the current century more than one eminent surgeon recognized the damaging effects of breast deformities and acknowledged their repair as a legitimate surgical concern. Many of the early attempts at correction of breast deformities failed in hypertrophic breasts because the surgeon did not reduce the size of the gland itself and did not form an adequate upholding skin brassiere. Also many of the early attempts were discarded because of the very marked scarring of the upper portion of the breasts which followed the primitive techniques.

Girard[3] first attacked a mammaplasty from the submammary fold area. He also recognized the fact that not only was it necessary to reduce the size of the gland itself but also to excise the redundant skin and repair it in such a fashion as to give an adequate skin brassiere. Following this great step forward there developed two schools of thought regarding the reduction mammaplasty, one being those who favored transpositioning of the nipple and others who favored free transplantation of the nipple. This difference of opinion exists even today although the indications for each type of procedure are quite clear in modern day surgery.

In very early times, attempts were also

*Presented before the 55th Annual Meeting of the Oklahoma State Medical Association, May 7-9, 1961.

made to enhance the size of the breasts mostly with injection of different materials especially paraffin. Many of these patients developed carcinoma or at least paraffinomas and the breasts had to be amputated because of this complication. Then, too, the shape was never assured because it depended a great deal on the temperature, pressure and other outside elements. In the past five years, however, many new synthetic compounds have been discovered and several have been found to be quite inert when inserted below the body surface. The ideal, of course, would be if we were able to take tissue from some people and implant it into others, but at the present time, tissue transplantation has not reached that level. It is entirely conceivable, however, that in the not too distant future such transplantation of tissues will be possible. Until that time it is necessary, if we are to enhance the bosom, to use and depend upon the inert synthetic compounds which are now available.

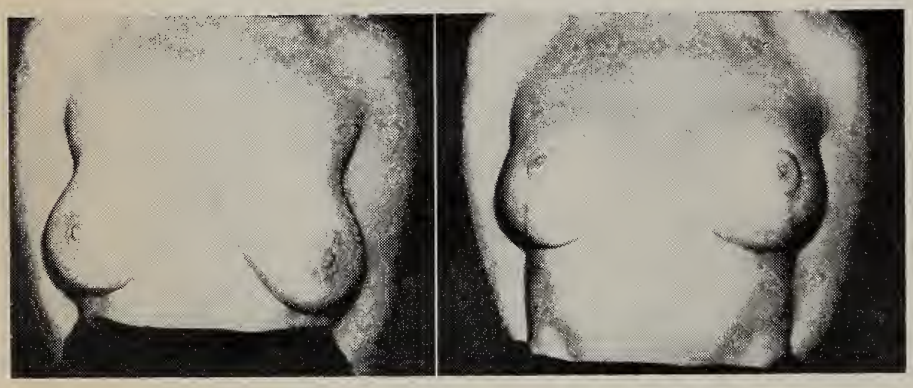


Figure 1. Reduction mammaplasty by transposition of of nipple.

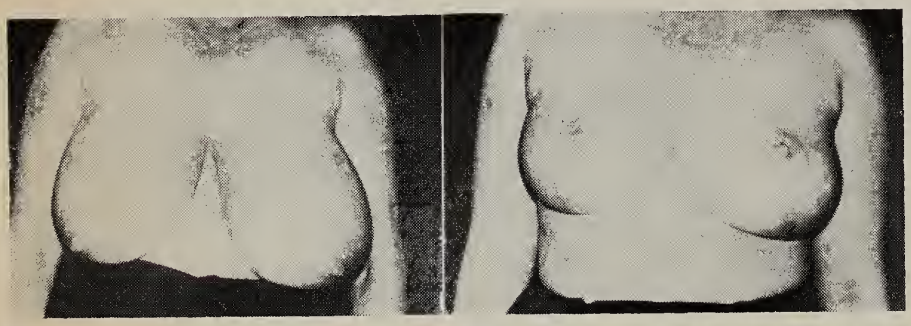


Figure 2. Reduction mammaplasty by transplantation of nipple.

Reduction Mammaplasty

So many different types of procedures have been fashioned for reduction of large dependent breasts that it is impossible to enumerate all of them or even to go into detail about the techniques of any.[4] Essentially what is to be accomplished is excision of over abundant breast tissue and fat plus excision of the redundant skin, thus forming a good skin brassiere to help hold the breast in its new position. Prior to the making of this skin brassiere the newly molded breast should be attached to the pectoral fascia with several large sutures in order to make certain that it will be held in that position by these sutures as well as by the skin brassiere.

As stated previously, there are two main methods of reduction mammaplasty. Namely, that of transposition of the nipple in which the nipple is not detached from the breast tissue itself but is moved to its new position along with the newly formed breast (figure 1). The other method is transplantation of the nipple where the nipple is actually removed and after forming the new breast in its new position a portion of skin is removed in the area where the nipple should be and the free transplant is sutured into the area (figure 2). By and large, most people lean toward transposition because this type of repair does not interfere in any way with the function of the breast and still gives good outlet for the lactiferous ducts. Also there is less chance of losing a nipple from lack of blood supply with the transposition technique than there is with the transplantation technique. In such cases, however, where the breasts are tremendous and have actually never really functioned as breast tissue itself then transplantation is probably the procedure of choice. Both methods can accomplish the desired goal of not only to reduce the size of the breast but also to put the breast back into its normal position in case it has drooped markedly. These procedures have been done for a number of years and the literature is filled with articles about them and the different techniques which can be employed. Therefore, it would seem advisable to spend less time on the accepted procedure of reduction and proceed to the modern and somewhat controversial topic of "augmentation mammaplasty."

Augmentation Mammaplasty

The rising tide of demands for augmentation mammaplasty must give cause for serious reflection on the part of physicians in general and the plastic surgeons in particular. Literally thousands of women in this country alone are seriously disturbed by feelings of inadequacy in regard to concepts of the body image. Partly as a result of exposure to advertising propaganda and questionable publicity, many physically normal women develop an almost paralyzing self-consciousness focused on the feeling that they do not have the correct size bosom. Regardless of what one thinks, these peoples' lives and often the lives of their husbands and families are made miserable by the development of such conflicts. Before embarking upon any type of augmentation mammaplasty one should be doubly sure that the patient is emotionally stable and understands completely just exactly what the operation can do and how it will be carried out. Without this prior understanding between patient and physician, catastrophe may follow.[5]

Older operations using pedicle flaps of the latissimus dorsi muscle, dermal fat grafts from the buttocks, or even the primitive use of the injection of paraffin have not given good results. Therefore, when a simple and safe implant became available and adequate laboratory studies had revealed that it was non-carcinogenic, its value could hardly be questioned. The synthetic compounds which have been utilized over the last ten years are ivalon, polyethylene, polyurethane, and polyether foam.[6] The latter appears to be the most popular and the one used most often by the plastic surgeons who are performing this operation. The results are uniformly good and the complications are minimal.

A great concern of both the surgeon and his patient is whether or not this type of procedure would enhance the possibility of developing carcinoma of the breast. As was stated previously, prior to the time of actually performing this operation upon any human being, many laboratory animals were subjected to insertion of these compounds and none of them developed any carcinogenic tendencies. Also, of all the implants which have been utilized in humans thus far there is as yet not a single case reported which has developed carcinoma. Of course, some of the persons who have had the operation performed will develop carcinoma but it is the feeling of the people who are doing this operation that the implant would not be the cause of the carcinoma. In other words, there are a certain number of people who are going to develop carcinoma and statistically at least the implant has not increased this number.

Operative Technique

To repeat, the patient is advised of all phases of the operation including any possible post-operative complication, the post-operative firmness, swelling, incision lines and so forth before the operation is ever undertaken. She is instructed to wash her chest and axillae thoroughly twice a day with pHisoHex* two days prior to the operation. She is admitted to the hospital the night before operation and routine pre-operative care is carried out. The operating room personnel is limited to those who are actually necessary to carry out the procedure and all persons in the operating room wear double masks. Conversation is limited.

The operation is performed under general endotracheal anesthesia with the patient in the flat position. The chest and axillae are again thoroughly scrubbed with pHisoHex and sterile drapes are applied. An incision of about two and a half to three inches is made in the submammary fold or approximately four inches below the nipple. In small breasts it is at times necessary to drop the incision line lower on the chest wall to prevent the nipple being held too dependent or the scar being on the new formed breast convexity (figure 3). All the small fat lobules which project into the incision are removed. Hemostasis is accomplished with electro-coagulation. The incision is deepened down to the pectoralis fascia. Following this the breast is elevated off the fascia with both blunt and sharp dissection. The amount of undermining needed will depend upon the size of the prosthesis that is to be inserted. The actual space should be greater than the prosthesis because if this is not created then

*Winthrop.®

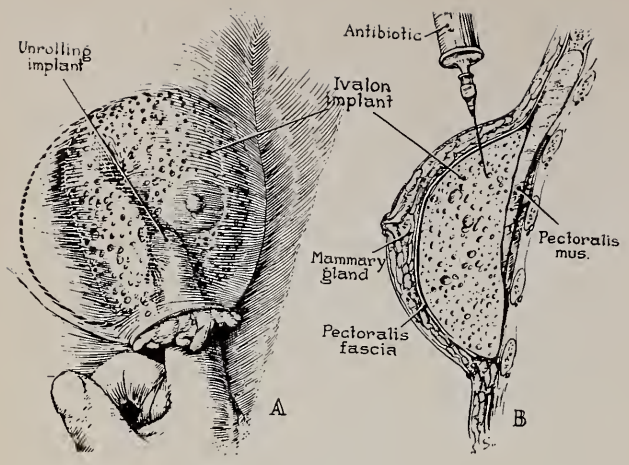


Figure 3. The insertion of the implant on the left and a cross section of the chest wall to show the position of the implant and the injection of an antibiotic.

there is a tendency for contracture of the scar tissue to extrude the implant as healing takes place. During the entire dissection no breast tissue is seen, the entire breast being elevated off the underlying pectoralis fascia. Perfect hemostasis is absolutely imperative. After adequate undermining has been accomplished, the prosthesis is inserted and tested to see if there is adequate space into which it is to fit, being careful to avoid any wrinkling or doubling over of the prosthesis during the time of the insertion. A small stab wound is made lateral to the incision and a drain is inserted between the prosthesis and the chest wall itself. One half million units of penicillin in five cc of water is injected into each implant. The wound is closed in routine fashion using four-zero white silk sutures for the subcutaneous tissues and five-zero black silk sutures for the skin edges. Dry sterile dressings are applied and a routine circular breast binder type of dressing is also employed.

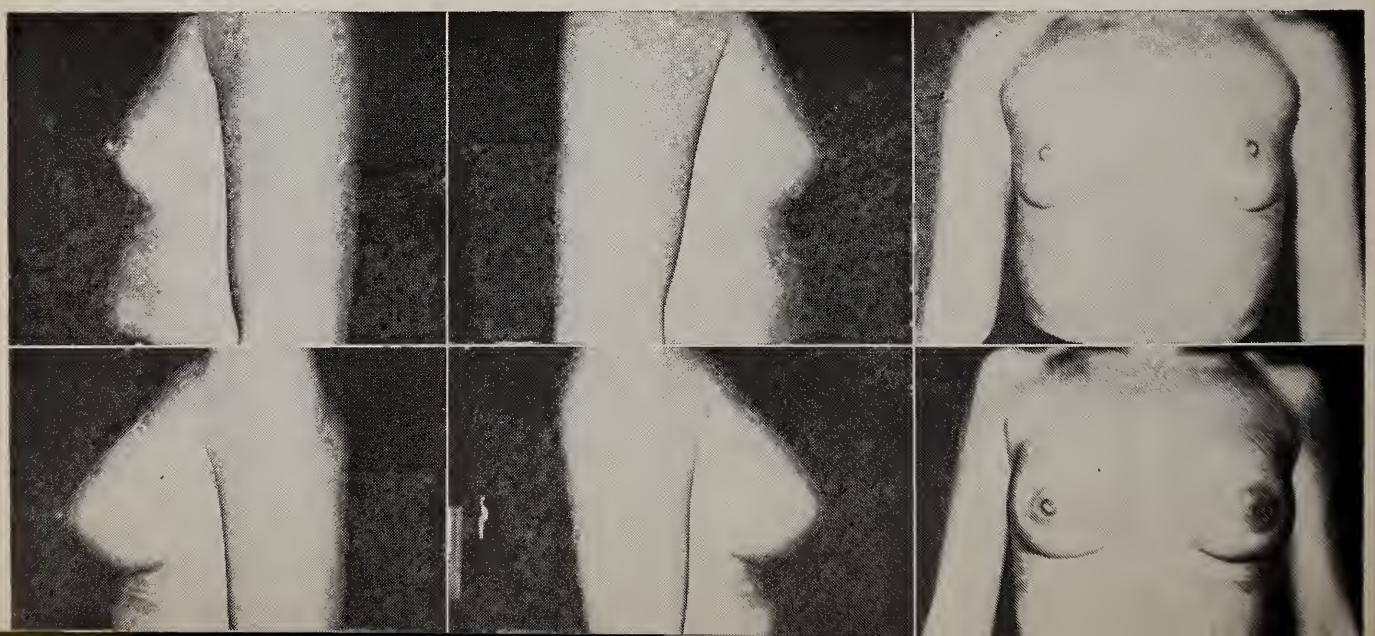
Post-Operative Care

The patient is kept on an antibiotic therapy, preferably penicillin unless she is allergic to it, for the entire hospital stay which will vary from three to five days. Twenty-four hours after the operation the large dressing is changed and the drains are removed. A very small dressing is then applied over the suture lines and the area from which the drain was taken. The patient is instructed to move her arms as little as possible and especially not to try to abduct the upper arms too far from the chest wall. The patient will usually cooperate very well in this because of the pain which she will have when moving her arms too much in the immediate post-operative period. The patients are allowed out of bed on the second post-operative day and on the third post-operative day all dressings are removed. The suture lines are covered with a coating of rezifilm and she is allowed to go home if there are no contraindications. The sutures are removed on the fifth post-operative day and she is allowed to wear a brassiere if desired after one week. She is encouraged to continue limited motion of her arms for approximately ten days to two weeks following the operation.

Complications

The most serious complication, of course, in such an operation, is the development of an infection which would in itself preclude the removal of the implant. In order to avoid any possible complications three im-

Figure 4. Augmentation mammaplasty with polyether foam implant. (Comparative photographs arranged vertically.)



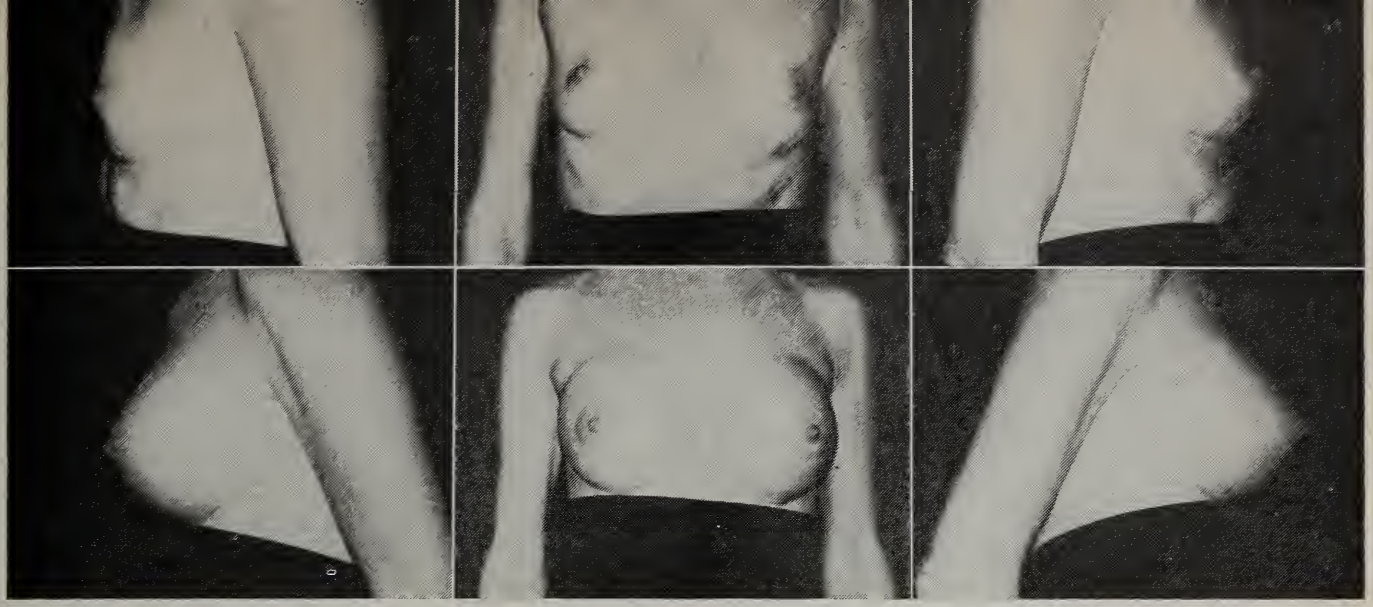


Figure 5. Augmentation mammaplasty with polyether foam implant. (Comparative photographs arranged vertically.)

portant steps in the procedure should be meticulously followed. One: *absolute hemostasis*, for if any blood collections do develop in and about the implant certainly this would enhance the development of infection. Two: *absolute sterile technique.* All precautions are taken to remove any possibility of infection in these patients. Third: probably one of the most important, or at least as important as the first two, is that the *space in which the insert is to be placed should be adequate to receive it.* Any time an implant is "stuffed" into a small pocket then you can be reasonably sure that it will have to be removed or will remove itself by extrusion. There is a moderate amount of edema following the operation but this very rapidly disappears within the first two to three weeks after the operation. The implants become quite firm but they are not stony hard and this has not been a complication about which the patients complain. For the first five to six weeks after the operation, the implants are fast against the chest wall but gradually loosen and become quite mobile. One should not try to speed the mobility of the implant because this in turn might cause bleeding and would even further the adherence of the implant to the anterior chest wall.

Results

The results are universally good if the accepted technique and the special points mentioned above are followed (figures 4 and 5). Practically all the patients are extremely pleased with the results of their operation and many spontaneously will use the phrase "it" (the operation) "has changed my entire life." One of the most gratifying aspects of the whole procedure is that many patients lose their "breast centered" orientation and take up many activities of a more extroverted nature. It has also been noted (contrary to initial thoughts) that satisfaction following the operation does hold up and the patients do not develop other problems or obsessions.

Conclusion

Mammaplasty whether performed for reduction of the size of the breasts or to increase the size of the breasts is an acceptable procedure. Careful screening of patients for any marked emotional disturbances should be carried out prior to the operation. The exact technique of the operation as well as the results to be anticipated should be carefully explained to the patient. In all operations, but in this one particularly, the surgeon-patient relationship is of prime importance.

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Too often physicians and patients alike assume that surgery is the ultimate treatment in intervertebral disk injuries. Not so! Good results can be attained with conservative methods if all details in management are followed.

Conservative Management of Intervertebral Disk Injuries

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IN 1934 Mixter and Barr[7] called attention to a new clinico-pathologic entity by demonstrating the presence of ruptured intervertebral disks in many cases of severe back and sciatic pain which were accompanied by meager neurologic findings. This classical study pointed out that nerve root compression, as a result of pathology in the intervertebral disk was a common cause of sciatic pain. Prior to that time it was thought, on the basis of post-mortem studies, that the underlying lesions were a true neoplasm, thus they were designated by a variety of terms such as chondroma, fibrochondroma and ecchrondosis.

A great portion of the literature on this subject has been produced by orthopaedic and neurologic surgeons who were preoccupied with the surgical approaches to the problem. A great argument has arisen as to whether fusion or nonfusion is indicated after laminectomy; whether wide or minimal laminectomy offers the best results and whether interbody, "H" grafts or facet fusions offer advantage.

Lumbago, backache and sciatica are frequent complaints heard in all fields of medicine. It is not surprising that a great portion of the laity have come to feel that very little can be done for backache and are confused and disturbed by the diversity of opinion among physicians on the management of backache, particularly in relation to intervertebral disk pathology. As a result large numbers of apparently sensible, intelligent citizens almost immediately seek the aid of unorthodox practitioners and cultists rather than their physicians when they experience the symptoms of acute back pain. Even some physicians think that very little can be done for an acute or chronic back problem in spite of the claims and counter-claims for various surgical procedures.[3] It should be further pointed out that while the greatest interest and the greatest number of studies, in relation to intervertebral disk conditions, have been made by orthopaedic and neurologic surgeons very little data and reports on this subject have appeared from other practitioners of medicine, such as industrial surgeons, general surgeons, rheumatologists, internists and general physi-

Presented before the 55th Annual Meeting of the Oklahoma State Medical Association, May 7-9, 1961.

cians who obviously are confronted with vast numbers of back injuries. Perhaps because of the many glowing reports in the world literature on the efficacy of the surgical treatment of the intervertebral disk there has evolved a general acceptance of surgery as the treatment of choice in the management of intervertebral disk injuries. Decker[2] states that there is agreement that symptomatic lumbar disk herniation requires surgical removal of the disk and this general attitude prevails at this time. The average physician, when faced with a patient demonstrating signs of intervertebral disk pathology, immediately assumes that surgical intervention is not only desirable but is urgently needed. On the other hand all physicians are regretfully aware of many patients who are not improved following intervertebral disk surgery. It is not surprising that a large segment of the population of this country exhibits a growing skepticism of our ability to solve the problem of backache, sciatica and intervertebral disk pathology by surgical means. Certainly the entire solution to this problem has not been proposed and consideration from another standpoint . . . the standpoint of non-surgical treatment . . . merits further study.

Recently there has been a greater emphasis on the conservative management of intervertebral disk injuries.[3,4,5,6] In reviewing this development it is apparent that differences of opinion regarding various phases of management of patients with suspected herniated disks do exist. The purpose of this paper therefore is to review some of these differences, with particular emphasis on the desirability and advantages of conservative treatment, and to report my experience in the management of forty-two (42) cases in which Prolotherapy techniques of Hackett[4,5] were employed.

In coming to the conclusion that conservative management of intervertebral disk problems is desirable and generally the treatment of choice, one is impressed with the fact that almost without exception there is agreement that each patient with an intervertebral disk problem should be given a trial of conservative treatment. The implication from this statement is that operation should be attempted only in those cases which do not respond to conservative treatment. This, of course, is a reasonable position but as a matter-of-fact many times conservative treatment is merely a gesture of a few days, or perhaps a week or two at most. If, at the end of that time, the patient has not achieved a fair degree of recovery the necessity for surgical intervention is immediately assumed. It is my firm conviction that many times not enough time or effort is directed toward conservative management of these patients to achieve the good results which are quite possible with this type of treatment. Recent reports emphasizing conservative treatment indicate that eighty to ninety per cent of patients with disk syndromes were satisfactorily relieved of their symptoms with conservative management.[9,13] Those authors reporting on the value and desirability of a conservative attitude in the management of disk injuries point out the necessity for adequate time,[12] complete rest and careful attention to detail.

Clinical Aspects of Intervertebral Disk Injuries

Many physicians are reluctant to assume responsibility for the treatment of disk injuries because of the difficulties in establishing an exact diagnosis. Frequently the assumption is made that complicated diagnostic procedures, such as myelograms, are necessary for an exact diagnosis of this condition. Bradford[1] has emphasized that the diagnosis of intervertebral disk injury is based primarily on clinical grounds and that any additional roentgenographic or laboratory information must be interpreted in the light of the history and physical examination.

History: Pain is usually the incapacitating symptom in a ruptured intervertebral disk. The location of the pain is extremely variable but most frequently patients will complain of pain *"in the hip."* Typical pain pathways are somewhat uncommon, however, this cannot be relied upon as a differential point. Any patient with complaints of severe low back pain, with radiation of pain to the gluteal area, the hip, the posterior aspect of the thigh or leg merits consideration as a possible disk problem. The relationship of pain to activity and rest is quite important.

It is of particular importance that attention be paid to the differentiation of types of pain resulting from other conditions which mimic intervertebral disk injuries. The problem of malingerers in compensation cases does not make the task easier. Inflammatory diseases, such as rheumatoid spondylitis, frequently present a type of pain somewhat radicular in nature which is extremely difficult to differentiate from true disk pathology. A well-coached claimant can present a thoroughly convincing description of classical sciatic pain. However, several points are available to help the physician to discern these differences. Table 1 is presented for this purpose.

The precipitating injury leading to intervertebral disk pathology is somewhat inconsistent. All degrees of physical injury can initiate disk pathology. These injuries can range from a simple maneuver, such as bending over for a piece of paper, a sneeze while the patient is lying in bed, to the obvious trauma resulting from automobile accidents, falls from buildings, etc. Among working men the commonest type of injury occurs when two men are carrying a heavy object and one of the men drops his end of the load and the other man exerts excessive physical effort to maintain the load for a few moments. Approximately twenty-eight per cent of patients present themselves with no history of injury whatsoever but will describe a long period of intermittent attacks over many years and increasing disability with each subsequent attack. It must be kept in mind that many times patients will develop such an awareness of the leg or sciatic pain that the back pain recedes in the patient's consciousness. The multiplicity of atypical pain patterns is often confusing to physicians; however, in general, with proper attention to details of the symptoms of disk injury they become meaningful and fit into fairly discrete patterns.

Physical Examination: Most physicians are familiar with the physical findings of intervertebral disk injuries and these will be only briefly reviewed. A few pertinent points demand emphasis. The patient must be disrobed and carefully inspected while walking and standing in addition to the other aspects of the examination. This will do more to eliminate uncertainty and confusion from the examiner's mind than any other single procedure in the course of making a diagnosis in the case of intervertebral disk injury. The objective physical findings can be divided into general and specific nerve root signs. The findings of importance are:

1. Flattening of the normal lordotic curve as evidence of muscle spasm.

2. Sciatic scoliosis . . . This is an extremely important objective finding which cannot be feigned by a malingerer.

3. A shift to the right or left as the patient flexes his spine.

4. Rigidity of the lumbar spine.

5. All movements of flexion, arising from hip flexion, is likewise of particular significance as a sign of intrinsic back pathology.

6. The straight leg raising tests, or Lasegue's test, while quite valid tests in themselves are frequently of little value in compensation cases.

This author has come to the conclusion that performing the straight leg raising test with the patient in the sitting position has much greater value.

7. The neurologic examination is particularly important in analyzing intervertebral disk injury and this must be performed in full detail.

8. Measurement of the thighs and calves . . . and leg lengths . . . determines muscular atrophy.

9. Sensory function should be evaluated. Frequently this is difficult in that suggestive patients say "yes" to anything.

10. The deep tendon reflexes, the Achilles' reflexes and the patellar reflexes should be routinely evaluated. Hyperactivity of a reflex is seldom of diagnostic significance or help. Weakness or absence of the deep tendon reflexes, particularly if unilateral, is of great aid in establishing a diagnosis. A more subtle observation of easy fatigability of one reflex or another is of help.

11. Pain on pressure and deep palpation over the course of the sciatic nerve, the iliolumbar ligamentary areas, the sciatic notch,

DIFFERENTIAL POINTS IN ANALYZING BACK PAIN*

	Arthritic Disease	Intervertebral Disks and Sprain Injuries	Psychomotor or malingering
Stiffness and soreness on arising in the A.M.	Marked and significant	Feels best after a night of rest	"Worse all the time" . . . "never better."
Complaints in predictable areas	Yes	Yes	No . . . Hurts everywhere.
Relieved, at least to a degree, by analgesics	Yes	Fair to moderate	Nothing helps
Affected by weather	Yes	No	No . . . At least not consistently.
Does pain awaken the patient at night?	Yes . . . Especially if an expanding lesion in bone. (Tumor or abscess) . . . No if the pathology is mild.	Not unless postural strain occurs. Relieved by changing positions.	No . . . May have insomnia from other causes.
Degree of pain proportionate to objective findings	Yes	No . . . particularly in early disk injuries.	No
Physical findings in predictable areas	Yes	Yes	No . . . Touch-me-not reaction.
Evidence or signs of organic disease	Apt to be present	Yes . . . If anatomical defect is cause of strain . . . Otherwise, No.	No
Radiographic change	Usually present	Only if anatomical defect is the cause.	No . . . If changes are present, not significant.
Laboratory change	Yes, if characteristic of disease	No	None pertinent to disease.

*Modified from Ishmael, Wm. K.: Problem of the Painful Spine: Oklahoma State Medical Journ. Nov. 55, pp. 375

TABLE 1

or the course of the sciatic nerve in the upper thigh and in the popliteal area will frequently indicate sciatic nerve root irritation.

Roentgenograms: AP and lateral projections of the lumbar spine must be of good quality. A spot-lateral film of the lumbosacral joint is desirable. Although occasionally intervertebral disk space narrowing may corroborate the diagnosis most frequently films are obtained to exclude, or diagnose, other lesions of the spine such as spondylolisthesis, bone tumors, osteoporosis, congenital anomalies, fractures or inflammatory conditions which may mimic disk injuries.

Myelography: Myelography is a most helpful procedure in *localizing* the compression of the nerve roots or cauda equina. Occasionally it is necessary as an aid in making the diagnosis of herniated lumbar intervertebral disk; however, it should be kept in mind that a significant percentage of error accompanies this procedure. Decker[2] reports myelography to be an accurate aid in localization in only seventy-nine (79) per cent of his cases. A great deal of controversy still exists in the value of myelography in the diagnosis of herniated intervertebral disk injuries. The greatest value lies primarily in the localization of the lesion in preparation for operation.

Since this paper is concerned with the conservative treatment of this disease the assumption is therefore made that it would indeed be a rare occasion where myelography would be necessary for clinical diagnosis of the lesion and the management of the patient. Therefore, myelography should be reserved primarily for those cases in which clear-cut indications for surgical interven-

tion exist and where aid is needed in localizing the level of the lesion.

Treatment

Surgical: It is the opinion of many authorities in this country[3,7,12] that there are three (3) clear-cut indications for surgical intervention in intervertebral disk injuries. These are summarized in table 2.

1. Economic factors.
2. Progressive or major neurologic deficits.
3. Intractable pain resulting from poor response to conservative treatment.

TABLE 2

Conservative Treatment: The general principle of conservative management of intervertebral disk injuries may be summarized as:

1. Rest
2. Heat
3. Time

Rest: Patients in acute pain with severe, bilateral muscle spasm, reversal of the lumbar curve, sciatic scoliosis, inability to move about without severe and recurrent spasms unquestionably require hospitalization. The simple problem of nursing care and attending to body functions renders home treatment relatively impractical. Bedrest in the hospital, on a firm bed in a flexed position, is the first step in the conservative management of these patients. Williams[12] has previously outlined the mechanical advantages of this treatment and others have repeatedly demonstrated that flexion of the spine causes an increase in the size of the intervertebral foramina and neural canal.

These patients should be placed at bedrest, either complete or with bathroom privileges depending upon the degree of muscle spasm, and should be kept at complete bedrest for at least several days until acute spasm has subsided. They should be maintained in the flexion position with the knees flexed and the head of the bed elevated during this entire period of time. If the patient becomes weary of the supine position then right or left decubitus, with the hips and knees flexed to maintain flexion in the lower spine, is permissable. Pelvic traction is most effective as an adjunct to conservative management. Pelvic traction offers some advantages over leg traction by ease of application, ease of movement and elimination of cutaneous irritation. It should be kept in mind that occasionally pelvic traction will aggravate the sciatic pain and in this instance it should be immediately discontinued. Results of treatment utilizing this method usually result in marked reduction of pain in from twenty to ninety-six hours, although occasionally periods of time up to seven to fourteen days may be necessary.

Drug Therapy: A wide variety of skeletal "muscular relaxants" has been offered in the past few years. Such drugs include mephanesin derivatives and zoxazolanine. Numerous reports have appeared recommending these relaxants as an adjunct to treatment and it is significant to note that none of these reports truly are based on any basic experimental data involving pure relaxation of skeletal muscles but rather they are clinical in nature. This author is unimpressed with the specific value of any of these muscular relaxants in the management of patients with back muscle spasm and intervertebral disk injuries. Curare, a skeletal muscle relaxant, acting at the myoneural junction seems to bring about some muscular relaxation and is of some help in relieving pain, particularly in the early management of a patient in acute back pain. Potent analgesic agents are of the greatest value in relieving muscle spasm and pain rather than any drugs advocated as specific muscle relaxants acting at the internuncial areas. On the other hand sedatives have obvious value in allaying apprehension, anxiety and tension of patients and they can be used liberally in the management of this aspect of the patient's health. A healthy skepticism of the alleged muscular relaxing drugs in the management of low back conditions and intervertebral disk injuries seems justifiable.

Back Supports: Occasionally a patient's symptomatology will be of such a nature particularly in the intermittent and recurrent intervertebral disk problems, that rest may be applied to the ambulatory patient through the use of a back support. While awkward and occasionally uncomfortable

and inconvenient they will nevertheless frequently serve as an effective compromise, particularly in cases where the patient simply cannot take time off from work to obtain the proper rest. For adequate support a wide corset, extending from the rib cage and enclosing the buttocks, is necessary. Extra stays may be added to these corset type garments. For severe chronic cases Duraluminum, leather covered supports in a variety of different designs, would be more effective.

Heat, etc.: The American public accepts the doctrine of heat, and the application of heat, to the back in the management of back conditions with probably more unanimity than any other aspect of therapeutics. The various ointments, lotions and salves and nostrums, designed as counterirritants emphasize this fact. Most Americans own a sun-lamp, heating-pad or hot-water-bottle which they apply with a great deal of enthusiasm and consistency. All modalities of heat apparently serve some symptomatic benefit in the management of acute back pain from intervertebral disk injuries. The mechanism of action is apparently through increased vascularity, reduction of muscle spasm and prevention of jelling phenomenae. Some authors[10] report advantages for ultrasonic applications, microtherm and other modalities of heat therapy. It is this author's observation that simple hot fomentations, applied to the patient's back with the patient in a slightly flexed position while prone over a roll of pillows, and with gentle hand massage, brings about as much symptomatic relief as any of the mechanical methods of heat application.

Time: One of the most common causes of failure to respond to conservative treatment in the case of acute back and sciatic pain, associated with intervertebral disk injuries is a general tendency to underestimate the factor of time. One simply cannot rehabilitate a patient with acute disk symptomatology with a few days in the hospital and a few days at home and get him back to work in two weeks.

These patients should be kept in the hospital, on a bedrest program with daily physical therapy treatments, in pelvic traction, until the pain is no longer present in the severe form and until he can stand erect without a list, undergo some movements of the back without severe triggering of paravertebral muscle spasm and until he is completely comfortable resting in bed in the flexed position. Approximately ten to fourteen days are required in acute disk injuries for response to treatment and for this state of recovery to be achieved. The patient can then be dismissed to his home to there continue on a similar program but with some increase in physical activity. He should be observed closely and carefully, on a weekly basis, and if necessary a back support should be applied to prevent recurrences of his difficulty if this is manifested from his history. At the end of approximately four weeks the acute pain, spasm and limitation of motion should have subsided to the point where a guided program of physical activity can be developed. *It is precisely at this stage that the patient should* NOT be returned to work since an almost immediate recurrence frequently develops. A far greater proportion of good results from conservative treatment will be obtained if the patient is granted an additional two to four weeks to complete his rehabilitation.

Flexion Exercises: Williams[12] devised the concept of flexion exercises many years ago. Flexion exercises strengthen and increase tone in the muscle fibers of the abdominal wall and lengthen lumbar muscles. When lordosis is lessened the tendency toward recurrence is minimized. After acute pain and spasm have subsided a progressive program of flexion exercises offers more to the patient, in terms of ultimate recovery, than any other single aspect of conservative treatment. To add a word of caution at this point . . . The exercise program *must not be initiated too early in the treatment* because a patient in acute pain and spasm from lumbar disk can have discomfort aggravated as a result of flexion exercises. Exercises should be reserved and used in the recovery and convalescent phase of disk injuries.

Prolotherapy

Another approach in the conservative treatment of back injuries is the Prolotherapy technique of Hackett.[4,5] The reports by this author have properly called attention to

the importance of ligamentary structures of the back in relation to the overall back problem. It is probable that these anatomical structures have been neglected generally in our thinking for many years. Hackett has also emphasized and reiterated the patterns of referred pain in the pelvis and legs, resulting from lesions of muscular and ligamentary structures in the low back. From his work we are able to more clearly differentiate *referred* pain in the extremities from *radicular* pain. The Prolotherapy technique is defined as "rehabilitation of an incompetent structure by the regeneration of new cellular tissue" and is based on the assumption of ligamentary and tendon relaxation or injury. By injection of a sclerosing or proliferating solution in the areas of fibro-osseous junctions of these tendons and ligaments, at their insertions, stimulation of healing and fibrosis allegedly results in elimination of the basic ligamentary weakness. Doctor Hackett has reported many thousands of cases treated in this manner, with reported good results in approximately eighty-two per cent.[4,5] There has been a considerable wave of enthusiasm among many physicians throughout the country and although as yet corroborating studies have failed to appear in any great number there is still considerable interest in this method of treatment.

In an effort to evaluate this technique a study was initiated in 1958 in a highly selected group of patients, utilizing the Prolotherapy techniques as outlined by Doctor Hackett. It should be pointed out that careful analytic studies in a clinical problem such as this are quite difficult. In the first place, a series of controls is particularly questionable since there are hardly any two backs, or back situations, that are identical. Likewise, anatomic variations are enormous. Other factors influencing the validity of results are related to the enthusiasm of the treating physician, the motivations of the patient, compensation factors, dependency of the patient on the physician and our inability to quantitatively measure results from treatment other than by evaluating the patient's subjective symptomatology. It was with a full awareness of these problems that this study was undertaken. It was felt that the validity of Prolotherapy techniques could best be evaluated in patients with chronic back disabilities of prolonged duration, with objective positive findings and in cases representing failure of other conservative measures. The patients selected for study initially had to fulfill the following criteria before they were subjected to this therapeutic regime:

1. Symptoms present for three (3) months, or longer.
2. Symptoms resulting from a specific injury or accident.
3. No evidence of other organic disease, such as rheumatoid spondylitis or other inflammatory lesions which could confuse the issue.
4. No evidence of true intervertebral disk pathology, or neurologic abnormalities. (In the series of a small group of patients with symptoms of true intervertebral disk pathology were tested by this method.)

All of the patients in this series were treated in an identical manner, (using sodium psylliate five (5) per cent with benzyl alcohol two (2) per cent)* with a local anesthetic solution, and in-so-far as it was possible using the same conservative techniques which included bedrest, analgesics and instructions in the care of the back. Eventually, after improvement of symptoms, they were placed on a flexion exercise program. An analysis of these data is presented in table 3.

ANALYSIS OF FORTY-TWO (42) CASES TREATED BY PROLOTHERAPY

Males	=	38
Females	=	4
		42

* * * * * *

Compensation Cases	=	32
Private Cases	=	10

Complete Recovery (3 year follow-up)	Unchanged	Worse . . . Surgery Necessary
20	13	9
		Total = 42

TABLE 3

*Sylnasol (P29), Searle.®

It is immediately apparent that the results in approximately fifty per cent of these cases were observed to be satisfactory. If this percentage seems to be low it should be pointed out that a vast majority of these cases were compensation cases and in this area all authors report lower figures in terms of positive results. Moreover, these cases were truly chronic problem cases and had been subjected to a host of therapeutic techniques prior to the attempts with the sclerosing or proliferating agents. Efforts to more clearly analyze the histology of the tissue response to injection of the sclerosing agent at the fibro-osseous junction have been somewhat unsuccessful so far. On the three occasions when surgical intervention was necessary a distinct effort to obtain a biopsy specimen, at the site of the injection, was made. In each instance no recognizable substance or tissue reaction, different from the ordinary surrounding connective tissue, could be identified. Some general specimens were obtained and when subjected to microscopic study were reported as "fibrous tissue."

One can conclude from an analysis of these data that Prolotherapy frequently may play a useful role in the management of a chronic back problem. These studies only weakly confirm the splendid results reported by Doctor Hackett. Additional time and experience may improve the results somewhat but it is my thinking that Prolotherapy is no panacea, that it should be used with intelligence and discrimination and only in very selected cases. Many times the superior results claimed for Prolotherapy techniques are in acute cases, of short duration, which would have recovered in due time with ordinary conservative measures. It is of interest to note that in the four cases with clinical evidence of herniated intervertebral disk in an acute form, in which the Prolotherapy technique was utilized, primarily as a therapeutic trial and with no hope of success, that all four responded with more outstanding results than any of the other patients in this series. These patients also received the other ordinary conservative treatment measures outlined above, thus, it is illogical to credit Prolotherapy entirely with the observed improvement. Further studies are being continued.

Summary

1. An emphatic plea for a conservative approach and attitude in the management of intervertebral disk problems has been made.

2. A review of the general history and physical findings is presented.

3. Details of the conservative regime of treatment are discussed.

4. Prolotherapy, the technique of Hackett, is reviewed and the data obtained in forty-two cases, utilizing this technique, are presented and conclusions are drawn based on this experience.

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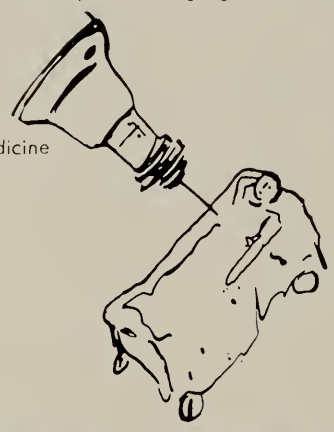
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The Continuing Education of The Physician

STEWART WOLF, M.D.*

No one denies that a career in medical practice requires that the physician be a perpetual student. The problem is how to acquire adequate and appropriate learning over the years. There are three educational resources available to every physician: 1—His day-to-day experience in practice. 2—The medical literature. 3—Medical meetings, including postgraduate courses.

The value of medical practice as a learning experience depends in part on one's sophistication derived from the literature, and from meetings and courses. What seems like limitless expansion of the medical literature, however, has imposed a crushing burden on those who wish to keep up. The result is that many physicians make no attempt to cover the literature and read only irregularly and in a casual fashion. Thus the medical literature is educating to any substantial degree only a small segment of the profession. Similarly, medical meetings and postgraduate courses have a relatively small number of adherents. The very active and education-minded American Academy of General Practice has managed to attract only approximately twenty per cent of general practitioners to its membership.

How can continuing education be brought to more physicians at a time when their need is great, when the practitioner of today is faced with far more complex diagnostic procedures, far more delicate problems of achieving metabolic balance in postoperative patients, and with far more potent and potentially hazardous drugs at his disposal than the practitioner of yesterday ever dreamed of?

The American Heart Association has taken cognizance of this problem, and, through its Professional Education Committee, has inaugurated a program of pilot projects in continuing education which will be tried in various parts of the country and which will be evaluated insofar as possible for their effectiveness in teaching.

The American Heart Association plan grew out of a two-year-long study by the Professional Education Committee of current practices in relation to continuing education. The experience and advice of men in practice, in medical schools, and in the field of education were brought together in a "white paper" entitled: The Physician's Continuing Education.*

The study recognized that the cultivation of a physician's analytical powers, and thus to sharpen his diagnostic acumen and to enrich his clinical judgment, is a far more important objective than bringing him abreast of technical developments in medicine. It was agreed that such an aim would require that the learner-physician be an active participant in the educational procedure and not just a listener. Opportunities must be afforded him to work with actual clinical problems in the course of the teaching program.

One important conclusion of the study was that the widespread lack of interest among practitioners of medicine in postgraduate courses may be related in part to inadequacies in the program being offered. Certainly there is a need for fresh and imaginative approaches to the problem of motivating the physician toward his continuing education and of offering him experiences which warrant his spending time, money and effort away from his patients.

*Professor and Head, Department of Medicine, University of Oklahoma Medical Center, and Chairman of the Professional Education Committee, American Heart Association.

*Write to: The Oklahoma State Heart Association, 825 N.E. 13th Street, Oklahoma City, Oklahoma, for a copy of: The Physician's Continuing Education.

MEDICAL CENTER

Message from the Dean

Several changes have been made this year in the procedure for admission to the School of Medicine. Back of them lies the desire of the Faculty, the Admissions Board and the Administration to select the best possible candidates. It was felt that some capable students have been lost to the school in the past because of a rather inflexible code of grade evaluation and because of the date in starting interviews with prospective candidates.

A student is eligible to enter medical school if he can present a minimum of 90 semester hours of work (exclusive of physical education and military science) from an accredited liberal arts college, and has within those 90 hours at least 34 hours in general chemistry, organic chemistry, physics, biology and English. He must complete his work with a B minus (1.5) average in the prescribed field and also in his overall average, and have at least a C average (1) in each of the prescribed subjects. Previously an F counted as -2. It now counts as -1, making the grading stepwise and bringing it in line with other medical schools.

Although the minimum grade requirement is no different, the new procedure provides that when a student repeats a course in which he made a D or an F, the new grade may be substituted for the D or F for the purpose of calculating an average for possible admission purposes. The change will permit the Admissions Board to consider a student whose work is on the ascendancy and who is working to overcome a poor first year.

Heretofore, applications were accepted from September 1 to November 1. After all applications were in, the students were ranked academically and interviews were started. As many as 30 applicants were processed in any one interview period. Some of the outstanding candidates were being interviewed and accepted by certain other medical schools before we could begin our interviews.

Starting this year, applications will be accepted from July 1 until December 1. They will be processed as they are filed. Interviews will begin in September. Groups of applicants being interviewed will be smaller so that a longer time may be spent with each student.

There are nine members of the Admission Board. The Board is divided into three interview teams, each with three members. When all interviews are finished for any given session, the Board meets as a whole to evaluate each applicant and take action.

Applicants must have successfully completed the Medical College Admissions Test. The premedical advisor's letter of appraisal is also considered. The student may be offered a place in the next year's class, deferred for later consideration, or rejected. Offers for a place in class are contingent upon the student satisfactorily completing all requirements within the time allocated.

Mark R Everett

The Epidemiology of Rheumatic Fever

ROBERT W. QUINN, M.D.*

Prevalence

DISCUSSION of the epidemiology of any disease is more meaningful if the disease in question can be put in its proper perspective as a health problem. Morbidity and mortality rates are most helpful, but it is extremely difficult to obtain accurate data on the incidence or prevalence of rheumatic fever or rheumatic heart disease, because they are not notifiable diseases in all states or countries and even where reporting is "compulsory" only a small percentage of these cases is recorded. This is partly due to negligence of the medical profession and partly due to the difficulty of establishing the diagnosis with accuracy. Probably the best estimates available in the United States of the prevalence of rheumatic fever and rheumatic heart disease, are those based on surveys in which children have been examined for the presence of rheumatic heart disease. Only a few such studies have been conducted in various parts of this country. Table 1 shows the results of some recent surveys in which the prevalence ranges from 0.32 per cent in a residential city in Southern California to 6.0 per cent in some industrial cities in Connecticut. Mortality due to rheumatic fever and rheumatic heart disease has decreased steadily in the past sixty years from one of the foremost causes of death in children to a position behind accidents, malignant neoplasms, congential malformations, infectious diseases including pneumonia and influenza, and nephritis and nephrosis. In this discussion three factors which influence the prevalence and incidence of rheumatic fever will be discussed, namely agent factors, host factors and environmental factors.

Agent Factors

The agent factor for rheumatic fever is not on quite the same footing as for tuberculosis or typhoid fever for example, where everyone agrees that the tubercle bacillus and the typhoid bacillus are the etiologic agents. Nevertheless, there is a great deal of evidence to support the belief that the group A hemolytic streptococcus is the agent factor in this disease. As a matter of fact, one could go so far as to say that rheumatic fever does not occur in the absence of a preceding streptococcal infection and no other bacteria are involved. The evidence for implication of the hemolytic streptococcus is of four kinds, clinical, bacteriologic, serologic and epidemiologic. A diagram constructed from data published by Escherich and Schick[12] in 1912 remains an excellent illustration of the sequence of events (figure 1). The first clinical evidence is a sore

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Location of Survey	Outstanding Characteristic of Survey Area	References	Date of Survey	Number Examined	Per cent with Rheumatic Heart Disease
Connecticut—Ansonia, Derby, Shelton	Industrial Towns	1	1946-47	754	6.0
Connecticut—Ansonia	Industrial Town	2	1946-47	179	5.02
Montana and Wyoming	North American Indians	4	1936	688	4.50
Connecticut—New Haven, Ansonia, Milford, Meriden	Industrial City and Town	3	1934	918	4.1
Connecticut—Milford	Residential Town	1	1946-47	475	2.5
Wisconsin—Madison	Residential City	5	1950	893	2.2
Connecticut—Hartford, Waterbury, Bridgeport	Industrial Cities	2	1946-47	1,732	2.13
California—Eureka	Seaport	6	1941	2,450	2.04
Colorado—Denver	Rocky Mtn. City	7	1944	1,845	1.63
California—Susanville	Sierra Nevada Mtn. Town	6	1941	732	1.09
Georgia—Dublin	Residential Town	8	1945	401	1.0
Colorado	Rural and Urban	11	1949-51	11,236	0.68
Arizona—Southern	North American Indians	4	1936	1,019	0.50
Florida—Dade County	Residential Area	9	1949	1,001	0.50
Florida—Pensacola	Seaport	10	1949-50	2,600	0.38
California—Redlands	Warm, Dry Residential Area	6	1941	2,635	0.32

TABLE 1
Recent surveys of rheumatic heart disease in school children.

throat with or without a rash, mild or severe. A throat culture at this time will reveal bacteriologic evidence in the presence of hemolytic streptococci in large numbers belonging to serologic group A, either typeable or non-typeable. Most children recover within a few days, or in the case of more severe infection within two or three weeks, without sequellae, and without antibiotics. An unknown small percentage of these infections may result in the symptom complex known as rheumatic fever, occurring from one to three weeks after the onset of the streptococcal infection. Some will have the classical manifestations, easily recognized, others will have symptoms so mild as to go unrecognized. Some of these so-called mild cases may eventually acquire rheumatic heart disease. If blood serum is obtained at the time of the streptococcal infection and again after recovery or after the onset of rheumatic fever, in either case a rise in streptococcal antibodies can be demonstrated by proper serologic tests. This rise constitutes serologic evidence that the throat infection which preceded the onset of rheumatic fever was indeed a streptococcal infection. This antibody increase is shown graphically in figure 1. The epidemiologic evidence for implication of the hemolytic streptococcus is more indirect. During periods of military mobilization rheumatic fever has been a major problem.[13] In the course of the epidemics of streptococcal infections which occurred in most of armed services recruit training centers during World War II there was a simultaneous increase in the incidence of rheumatic fever of epidemic proportions.[14,15,16] Similar increases have been seen after milk-borne epidemics of streptococcal infections and outbreaks in boys schools.

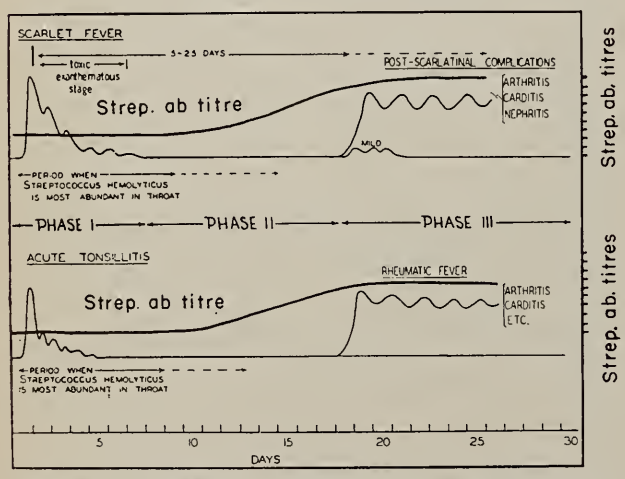


Figure 1. Diagrams modified from Escherich and Schick to illustrate the possible forms (indicated by temperature curves) which the nonsuppurative "complications" of scarlet fever and of acute tonsillitis may assume. The division of this process into three phases is also shown.[12]

Group and type	Streptolysin O	Streptolysin S	Streptokinase	Hyaluronic acid	Hyaluronidase	Proteinase	Erythrogenic toxin	Total
A 1	3	5	3	5	0	1	3	5
A 3	1	1	1	1	0	0	1	1
A 4	2	3	3	3	3	1	1	3
A 5	1	0	1	0	0	0	1	1
A 6	9	9	10	10	0	1	7	10
A 12	12	11	14	14	0	0	12	14
A 19	2	2	2	2	0	1	2	2
A NT	31	44	38	43	7	17	31	49
NG	1	0	0	1	0	0	0	1
Total	62	75	72	79	10	21	58	86

TABLE 2

Relationship of substances produced to group and type. From Hardin, Quinn and Avery.[17]

The biologic characteristics of the hemolytic streptococcus have been studied minutely and exhaustively ever since its first isolation in pure culture by Fehleisen in 1883. Many times these studies have been directed toward the search for the magic and elusive rheumatogenic strain or rheumatogenic substance but today it seems that any strain of group A hemolytic streptococcus has rheumatogenic capabilities but no rheumatogenic substance has been discovered.

The hemolytic streptococcus produces a great variety of antigens, some are extracellular products, others are cellular components. There is a striking difference qualitatively and quantitatively in the enzymes and antigens elaborated by various strains and occasionally by strains of the same type. Table 2 illustrates that strains of identical group and type do not necessarily have identical characteristics when grown in vitro. In contrast, biologic characteristics of streptococci recovered from patients with acute rheumatic fever are very much like those recovered from patients with acute glomerulonephritis, pharyngitis or from chronic carriers,[17] and when these strains are arranged according to the four clinical syndromes with which they were associated, the patterns of enzyme production are similar (table 3). Unexplained are the variations of clinical manifestations which may occur in different patients infected by the same serologic group and type; a mild sore throat in one, a severe sore throat in another, scarlet fever, rheumatic fever or nephritis in still others.

Some of the characteristics of the agent in rheumatic fever are so intimately related to the human host that they must be discussed in this context. Infectivity, the ability to adapt itself to the human body is highly developed and is well demonstrated in carrier studies of normal school children in Nashville, Tennessee.[36] These studies indicate that a high percentage of children carry group A streptococci in their throats during the school year. Figure 2 shows the seasonal and yearly changes in rates over a two-year period. One of the lessons to be learned from this study is that the hemolytic streptococcus is a very common inhabitant of the throats of normal children and that the carrier rates and serologic groups and types change markedly from year to year. In pathogenicity, i.e., the ability of the agent to set up a specific clinical reaction, the hemolytic streptococcus is remarkably versatile; pharyngitis, tonsillitis, scarlet fever,

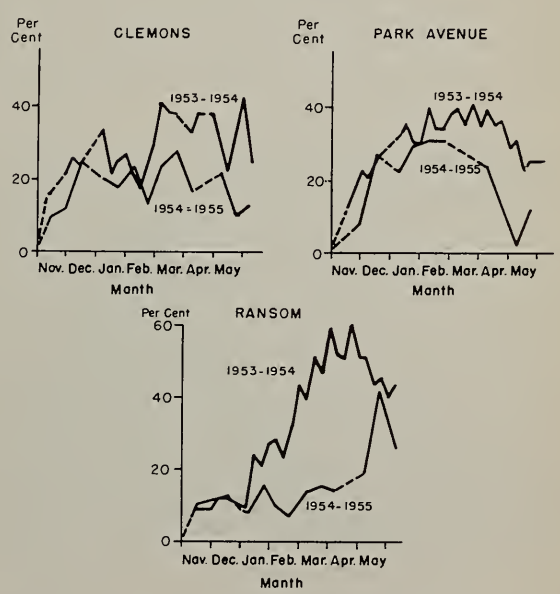


Figure 2. Prevalence of positive throat swabs in children in three Nashville schools 1953-1954 and 1954-1955. From Quinn, Denny and Riley.[36]

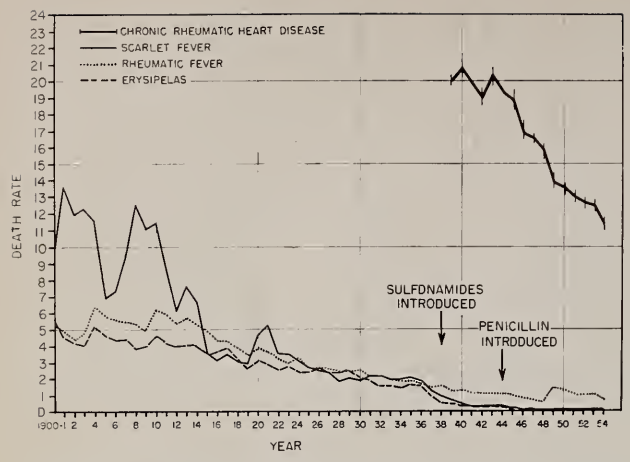


Figure 3. Annual death rates from rheumatic fever, scarlet fever, and erysipelas, 1900-1954 and from chronic rheumatic heart disease 1939-1954, United States.

nephritis, erysipelas and rheumatic fever being among the more common different clinical types of infection. Virulence—a measure of the severity of the reaction produced seems to be an extremely variable characteristic of the hemolytic streptococcus. Not only does it vary from patient to patient but also it changes over the years. It is common clinical experience to see a patient with a mild streptococcal infection and another patient with a severe infection due to the same group and type of streptococcus. In the training centers of the U.S. Navy during World War II where great epidemics were occurring due to types 19, 17 and three, the clinical manifestations in the recruits who were infected ranged from an almost asymptomatic illness to one with severe purulent and non-purulent complications rarely even ending in death. The decreasing mortality rates for some easily recognized streptococcal infections since 1900 (namely scarlet fever, and erysipelas—figure 3) suggest the possibilities that the hemolytic streptococcus is decreasing in virulence, or that the human race in the United States at least, is acquiring greater resistance or perhaps both. The fourth characteristic related to the human host is the antigenic power of the infecting streptococcus. Not many studies are available relating the antigenic characteristics of the homologous hemolytic streptococci to specific antibody responses following streptococcal infections but one study done at the University of Wisconsin[18] does furnish some evidence. In about one-fourth of the patients studied who received no antibiotics, there was no antibody rise to a given streptococcal antigen even though the bacteria elaborated that particular antigen. So, the fact that a particular infecting streptococcus elaborates a specific enzyme does not mean that there will always be a specific antibody response.

The reservoirs and sources of infection of the group A hemolytic streptococcus are usually humans who may have an acute infection or be carriers either convalescent or chronic. There is still the question, whether chronic carriers are sources of infection for other humans, which has not been proven one way or the other. Certainly the large numbers of children who carry group A typeable and non-typeable strains in their throats for many months, constitute a constant reservoir. Occasionally cows may be infected with group A streptococci from humans. Ordinarily bovine mastitis is caused by group B streptococci which are not pathogenic for humans, but if the mastitis happens to be caused by a group A strain, and if the milk is not pasteurized before human consumption, then the stage is set for a serious and explosive milk-borne epidemic of streptococcal infections. Fortunately, due to almost universal pasteurization of milk in the United States and rigid milk ordinances, milk-borne epidemics are few and far between. Occasionally food-borne epidemics occur but these too are uncommon.

Nutrition has not been shown to play a decisive agent role in determining whether a child will acquire rheumatic fever or not. No dietary deficiency has been demonstrated. Naval recruits who acquired rheumatic fever during World War II were receiving optimal diets. The recent report of Coburn on the protective effect of egg yolks in preventing rheumatic fever is very interesting but needs confirmation.[19]

Host Factors

Host factors which influence susceptibility to rheumatic fever are of great variety and variable importance. What it is that makes one child acquire rheumatic fever and another escape, when both have had similar experiences with the same strains of streptococci, both may belong to the same family, or both are of the same age, sex and race

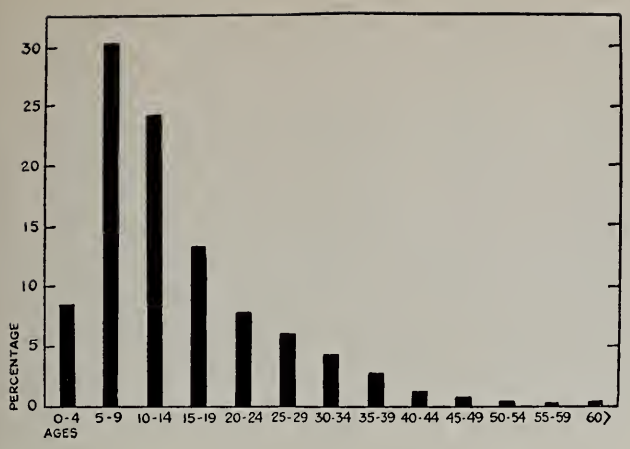


Figure 4. Percentage distribution by 5-year age periods of 2,539 first attacks of rheumatic fever, with or without rheumatic heart disease, based on past or present histories, among cases admitted to Philadelphia hospitals from January 1, 1930, to December 31, 1934. From Hedley.[20]

and are similar in other respects, is a question which is unanswerable at the present time. Nevertheless there are host factors of real importance. All we can do today is observe the effects of these factors and work toward a better explanation of how they operate.

Rheumatic fever rarely occurs before the age of four. It is even quite uncommon before five. From five on, the attack rates increase until they reach a peak between the ages of seven to ten. There is a gradual decrease from then on, so that initial attacks are rarely seen after the age of 20. Figure 4 shows the percentage distribution by five-year age periods of first attacks of rheumatic fever among cases admitted to the Philadelphia hospitals from 1930 through 1934.[20] This figure would probably hold true today although there would be a good deal of argument by some as to whether the patients over 20 were actually experiencing their first attack. The age of onset of 500 cases of rheumatic fever seen at the New Haven Hospital and Dispensary in the early 1930's[21] (figure 5) illustrates even more clearly the ages of peak onset between seven and ten. Among the explanations offered as to why this should be, is that the child needs to have several streptococcal infections before he can acquire hypersensitivity to the streptococcus or its products. Another is that the very young child's antibody forming mechanism can not react in a hypersensitive manner partly because of immaturity and partly because there have been too few stimuli. Paradoxically, adults do not have rheumatic fever nearly as often as children and yet their antibody forming mechanisms must be mature and most of them have had numerous streptococcal infections. However, adults probably do not have as many or as frequent streptococcal infections as children and it may be that frequency of infection plays a role in pathogenesis.

Often the statement is made that rheumatic fever occurs more frequently in the female than the male. Possibly this is because chorea occurs more frequently in girls than boys, and the same reasoning has been applied to rheumatic fever. There is reason to believe that if a large enough number of cases could be accumulated there would be no significant difference in morbidity or mortality for the two sexes. In none of the recent surveys have any significant differences in prevalence by sex been found and it is generally agreed that prevalence is about the same in the two sexes.

Racial characteristics which differentiate one people from another are often sharply defined. Rheumatic fever, however, seems to be common to all races, certainly rheumatic heart disease can be found, if looked for, almost any place on earth. There are marked differences in prevalence among different races but these differences do not seem to be due to any inherent difference in susceptibility. Environmental factors which are peculiar to certain people, such as crowding,

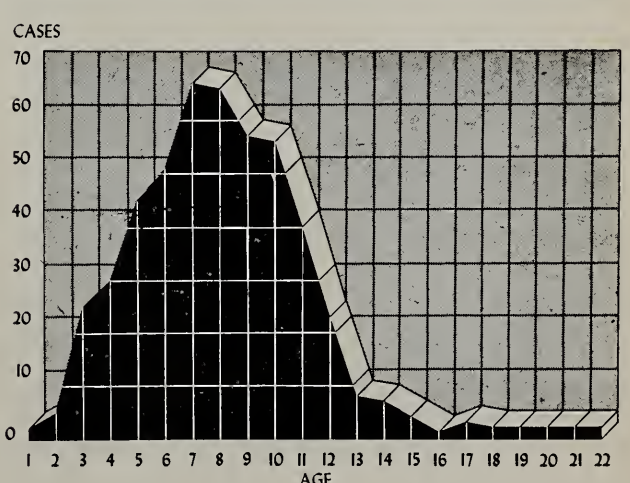


Figure 5. Age at onset of 500 cases of rheumatic fever seen at the New Haven Hospital and Dispensary between 1930-1935. From Leonard.[21]

Substance produced	Nephritics	Rheumatics	Pharyngitis	Carriers	Total
Streptolysin O	21	17	16	7	61
Streptolysin S	19	22	25	10	76
Streptokinase	26	19	20	7	72
Hyaluronic acid	26	22	21	6	75
Hyaluronidase	1	6	3	0	10
Proteinase*	3	9	7	2	21
Erythrogenic toxin†	22	11	14	6	53
Total number of strains in each group that were tested	26	25	25	10	86

*The following strains were not tested for proteinase production: 1 nephritic, 4 rheumatics, and 8 pharyngitis.
†Erythrogenic toxin production was not determined for: 2 rheumatics, 2 pharyngitis, and 1 carrier.

TABLE 3

Enzyme production of strains associated with four clinical syndromes. From Hardin, Quinn and Avery.[17]

geographical location, climate and exposure to the hemolytic streptococcus are all intertwined with the way of life of different races and probably play the key roles in determining prevalence. The Irish, Italians and Jews have all been singled out as being particularly susceptible to rheumatic fever at one time or another, but as Paul[22] points out, these impressions may have been the result of studies which measured the frequency with which certain races used a particular hospital where the data were collected.

The general health status of rheumatic and non-rheumatic children does not seem to differ in any important respects previous to the onset of rheumatic fever. The general impression one might get from seeing rheumatic children in convalescent homes and pediatric clinics is that many of these children, perhaps close to half of them, are substandard in general health characteristics such as nutrition, growth and dental hygiene. These defects are more likely a reflection of the socio-economic background of the child rather than some inherent defect in make-up. An equal number of non-rheumatic children from similar socio-economic classes would probably show the same deficiencies in about the same proportion. Perhaps because rheumatic fever rates are highest in the lower socio-economic groups this environmental characteristic has too often been interpreted as a host characteristic.

The observation that parents and close relatives of rheumatic children have a higher prevalence of rheumatic fever than the general population or than non-rheumatic families, is an old one[23,24,25,26] which has led to the assumption of a hereditary factor[27,28,29] in the etiology of rheumatic fever. The high familial prevalence of rheumatic fever is generally accepted but whether this is due to the effects of heredity or to the combined effects of agent and environment is controversial. Wilson and her colleagues,[30,31] applying genetic methods to the study of rheumatic families have concluded that heredity and not environment is responsible for the high familial prevalence of rheumatic fever. Gray et al,[32] adapting the genetic criteria of Wilson to the study of a group of rheumatic families in New Haven, Connecticut, found that the observed number of cases of rheu-

HEREDITY IN RHEUMATIC FAMILIES					
	No. of Families	Total No. Children (Second Generation)	Rheumatic Children Predicted*	Observed	
				No.	%
Neither parent rheumatic	31	168	55	59	35.1
One parent rheumatic	6	29	15	16	55.2
Both parents rheumatic	3	9	9	6	66.7

*Predicted on basis of single autosomal recessive gene with correction for family size and bias in selection of families.

TABLE 4

Predicted and observed cases of rheumatic fever in rheumatic families. From Gray, Quinn and Quinn.[32]

matic fever which occurred in these families approximated very closely the number predicted on the basis of a single autosomal recessive gene, except in the mating of two rheumatic parents (table 4). These findings and those of Wilson are very impressive when considered in relation to these particular studies but when applied to the findings of other surveys and of everyday clinical experience, unless resort is made to the genetic term "penetrance," the genetic formula fails to explain the occurrence of rheumatic fever in individuals in whom there is no family history of rheumatic fever. The study of Gray et al indicated in addition, that socio-economic and other environmental factors played a strong role in the occurrence of rheumatic fever in both rheumatic and non-rheumatic families. The age old question of heredity vs. environment has not been settled in the case of rheumatic fever, but until we have good evidence to the contrary it seems best to work along the lines that both hereditary and environmental factors are important among the causative factors. Man is a victim of both his genes and his environment.

Environmental Factors

Environmental factors, which along with host and agent factors exert such a profound effect on the lives of men can be discussed logically under physical and socio-economic influences although both are interrelated. Two features of man's physical environment which seem to be important in determining prevalence of rheumatic fever are geographic and climatic which are also intimately related. Both rheumatic fever and rheumatic heart disease are observed much more frequently in the temperate zones of the earth than in regions further north or south. Admittedly there have been no attempts to measure the prevalence of these diseases in arctic regions and only a few in tropical regions, which reveal the presence of rheumatic heart disease in relatively low numbers. Surveys done in the United States over the past 20 or 30 years have in general shown declining prevalence rates from northern to southern latitudes. However, if surveys could be made in each of the major geographic and climatologic areas of the United States, simultaneously, using the same diagnostic criteria, a much more accurate picture could be obtained. A recent survey done in Nashville, Tennessee indicates that rheumatic fever and rheumatic heart disease are as common as any place in the United States at this time. Possibly at one time the differences in rates attributed to latitude and climate were much greater than at present. One will have to go much further south than Nashville to get out of the "rheumatic fever belt," even further south than Miami, Florida, because Saslaw[9] has found the rate of rheumatic heart disease among native Floridians to be about the same as that reported by Maresh and colleagues[11] in Colorado.

A useful way to evaluate the effect of climate on a disease is to consider climate to be of two kinds, macro and micro. These terms, attributed many years ago to Danisvewsky of Moscow, Russia, have been put to practical use by Paul in the United States. In evaluating the effects of climate on host and agent both must be considered. Macroclimate implies climate in the meteorologic sense: rainfall, temperature, humidity, barometric pressure, seasons, solar effects, etc. It has been agreed for a long time that those temperate zones which have the longest winters, with lowest mean temperature also have the highest rheumatic fever rates. A macro-climate of this type also has an indirect effect in that it tends to keep people indoors, thereby creating a micro-climate which would favor the spread of pathogens including the hemolytic streptococcus. Micro-climate refers to man's immediate environment: the home, the classroom, the movie theatre, the school bus. One of the characteristics of man's environment about which there is much hearsay but few facts is dampness. If one defines dampness arbitrarily as high relative humidity, then it is probably always damp in the tropics or at sea and yet the occurrence of rheumatic fever in these two places is very low so there must be other factors than dampness per se which help influence rates. The effect of dampness on the agent takes on greater meaning when viewed in the light of Well's work in aerobiology.[33] He showed that micro-organisms, including the hemolytic streptococcus, suspended in humid air could survive ultra violet irradiation much longer

than when in dry air. One wonders about the role of this phenomenon in determining why streptococcal infections and rheumatic fever occur most frequently in the late winter and early spring months when it is cold and damp and ultra violet effects are minimal.

The socio-economic influences of man's environment exert a powerful effect on the prevalence of health and disease. These effects are complex, subtle and numerous. They are difficult to measure and the results of measurement of socio-economic effects are not always clear-cut probably because they are so interrelated and almost impossible to isolate. Rheumatic fever has often been called a disease of crowds because the highest prevalence was observed in areas of greatest population density, i.e., in urban rather than rural areas, in large cities rather than small cities or towns, and finally in the sections of cities with the most crowding. The overall effect of crowding seems paradoxical if viewed in the light of world population. Population density today is the greatest in the history of man. In the United States our population has more than doubled since 1900 but mortality rates due to rheumatic fever in 1954 were less than a quarter as high as those in 1900 (figure 3). We have no way of knowing whether morbidity rates have decreased to the same extent but never in the history of man have so many people been jammed into such small spaces. If crowding per se determined the rates of rheumatic fever, we would expect the prevalence to have increased but the opposite has happened. Obviously, there are other factors than just crowding which influence prevalence but its effect should not be minimized because even as recently as 1946-47 a study in Connecticut showed that significantly more children living in crowded homes were rheumatic regardless of the urban or rural location of the home,[34] so that today, we are faced with a confusing set of observations in which crowding at the community level does not affect the morbidity rates but crowding at the household level does. Almost without exception crowding in the home is found in homes of those belonging to the lower socio-economic levels. Crowding and poverty usually go together so that all of the attributes of poverty such as poor nutrition, poor environmental sanitation, low income, low educational level, and possibly also lower intelligence levels are all part of the many influences under the heading of socio-economic which help determine morbidity and mortality rates. A study in New Haven, Connecticut showed "that the mortality rates due to rheumatic heart disease during the years 1920-1948 have been consistently higher in the poorest living area than in the middle or best strata.[35] These findings are consistent with the concept that rheumatic fever rates are usually highest in an environment where crowding is most prevalent, and housing and socio-economic status the lowest. It would seem that in New Haven, Connecticut continued residence in the poorest living areas after the onset of rheumatic fever would carry a greater risk of mortality due to rheumatic heart disease than continued living in the two better ecological areas." It is always risky to apply impressions gained from one area to another at a different time and place but these findings could possibly apply to many cities in the United States today.

Summary

Multiple influences are at work in the etiology and pathogenesis of rheumatic fever. These influences can be listed under the heading of agent, host and environmental factors but in reality they are all intimately interrelated and inseparable. Today there is general agreement that the agent factor is the hemolytic streptococcus belonging to serologic group A but just how the streptococcus initiates rheumatic fever is not known. There undoubtedly are host factors which make certain individuals more susceptible than others and determine which child will acquire rheumatic fever, but it is not at all clear what these are. Age is one host factor of importance, rheumatic fever rarely occurring for the first time before the age of four or after the age of 20. There is a high prevalence in certain families thought by some to be due to hereditary predisposition, but this is not always consistent and environmental factors interfere to confuse the picture. The individual's experience with the hemolytic streptococcus undoubtedly plays a very important role, but this too is influenced by environment. Among the

environmental characteristics which play an indirect but important role in setting the stage for rheumatic fever and also higher prevalence and incidence rates are high population density, crowding in the homes, and low socio-economic status.

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Vanderbilt University School of Medicine, Nashville, Tennessee

CLINICAL CASE CONFERENCE

CARDIOVASCULAR DISEASE

Veterans Administration Hospital

825 N.E. 13th — **Oklahoma City**

Sunday, September 17 — **8 a.m. - 5 p.m.**

Some Immunologic Aspects of Rheumatic Fever

ROBERT W. QUINN, M.D.

Introduction and Definition

ALMOST three decades ago Schlesinger[1] and Sheldon[2] in England and Coburn[3] in this country revived interest in hemolytic streptococcal infections as the percursor of initial attacks and recurrences of rheumatic fever. Since then a vast amount of work has been directed at this organism in an effort to establish it as the agent factor in rheumatic fever and toward the immunologic response of the host to infection by the hemolytic streptococcus. Few of these studies, of which only a small number are referred to here, truly have been concerned with immunity, most of them have dealt with measurements of antibody response to various streptococcal products or components. These antibodies, with one exception, antibodies against the type-specific M protein, have little or nothing to do with immunity to the hemolytic streptococcus. Indeed, there is no conclusive evidence at the moment of the role streptococcal antigens or antibodies against them might play in the etiology of rheumatic fever. The phenomenon of hypersensitivity has long been thought to play a role in the pathogenesis of rheumatic fever. If, for the sake of this discussion, we assume there might be some altered reactivity of rheumatic individuals to products or components of the hemolytic streptococcus or to other non-streptococcal antigens, then it ought to be possible to measure these differences quantitatively. It is the purpose of this paper to discuss some recent studies which have attempted to single out differences in the manner in which rheumatic individuals, i.e., those with rheumatic fever or rheumatic heart disease, respond to antigenic stimuli.

On the basis of numerous investigations, it has become well-established that individuals who acquire rheumatic fever after a streptococcal infection, have higher streptococcal antibody titres than those individuals who recover without acquiring rheumatic fever.[4,5,6,7,8,9,10] There is always some overlapping, but if rheumatics are considered as a group this observation seems to hold true. Figures 1, 2 and 3 illustrate the comparative response of patients following streptococcal infections for three streptococcal antibodies, antistreptokinase,[9] antihyaluronidase,[11] antistreptolysin "O".[12] For each of these three antibodies the frequency distribution and mean titres for patients with acute rheumatic fever were at a considerably higher level than for patients convalescent from streptococcal infections who did not acquire rheumatic fever. When these differences are analyzed they prove to be statistically significant. These findings might lead one to conclude that rheumatic subjects develop higher levels of streptococcal antibodies because they are funda-

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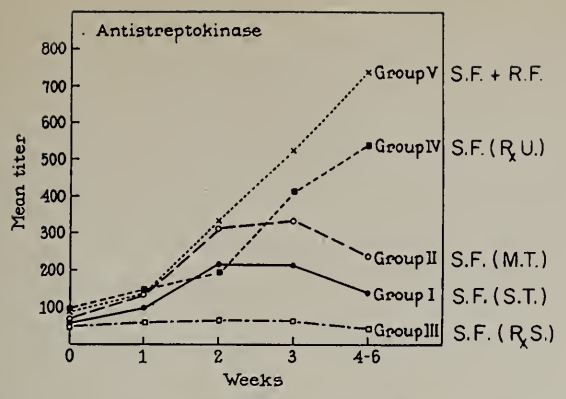


Figure 1. Antistreptokinase response in patients infected with group A hemolytic streptococci. From Anderson, Kunkel and McCarty.[9]

S.F. (℞ S.)—Scarlet fever, treatment satisfactory.
S.F. (S.T.)—Scarlet fever, single type of streptococcus.
S.F. (M.T.)—Scarlet fever, multiple types of streptococci.
S.F. (℞ U.)—Scarlet fever, treatment unsatisfactory.
S.F. + R.F.—Scarlet fever followed by rheumatic fever.

mentally different. However, such a conclusion is open to a number of criticisms, one of which is that the elapsed time since the most recent streptococcal infection may be quite different in the two groups. If the rheumatics had experienced more numerous or more recent streptococcal infections than the non-rheumatics of comparable ages the question is, "would they be more likely to respond with a higher titre than those who had less numerous or less recent infections?" Another objection is that the dose of antigen in a streptococcal infection is unknown and uncontrollable and it could be that some patients have higher antibody titres because they received a larger dose of antigen during the infection. However, if the individuals who contract rheumatic fever have reacted in a hypersensitive manner to an antigenic stimulus provided by the hemolytic streptococcus is it conceivable that they might also react in an abnormal manner to any antigenic stimulus?

With this question in mind, several investigators have administered antigens to rheumatic and non-rheumatic subjects and measured quantitatively the antibody response. In the first of these studies[13] the antigens employed were type I pneumococcal polysaccharide and BCG vaccine. Table I illustrates that the quantitative precipitating antibody response to type 1 pneumococcal polysaccharide was not significantly different in the two groups and table 2 shows that sensitivity to old tuberculin following BCG immunization was not significantly different. In the next study by Miller, Kibrick and Massell[14] the antigens used were influenza virus vaccine, containing influenza PR 8 and influenz B Lee strains, and monovalent typhoid vaccine. There were no significant differences between the rheumatics and controls in antihemagglutinins or complement fixing antibodies against strain PR 8 and B Lee. Likewise, there were no significant differences in response to typhoid "H" or "O" antigens. The only study of this type which has shown clear-cut higher response of rheumatics compared with non-rheumatics was one by Padovcova and his colleagues.[15] In figure 4 the results of this study in which the subjects were given a single dose of Brucella antigen are shown. Until this latter study, it seemed clear that rheumatics as a group do not react differ-

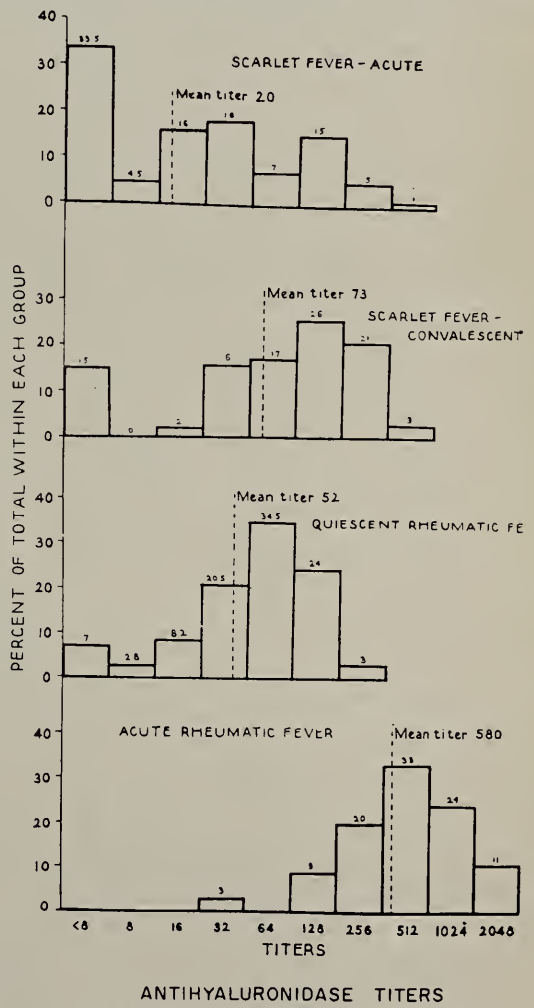


Figure 2. Mean Antihyaluronidase titres in patients with scarlet fever, acute; scarlet fever, convalescent; quiescent rheumatic fever and acute rheumatic fever. From Harris and Harris.[8]

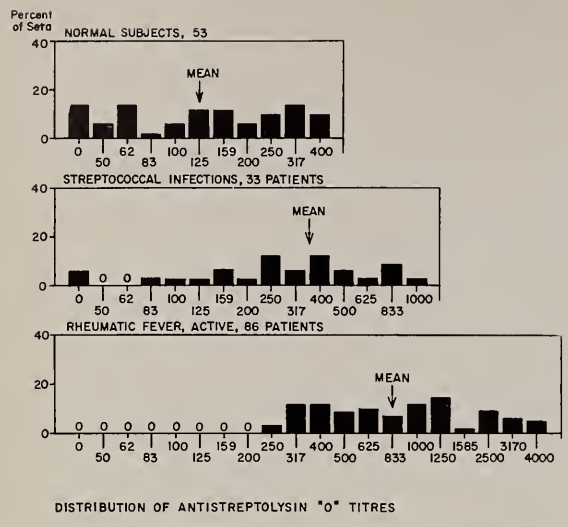


Figure 3. Frequency distribution and mean Antistreptolysin "O" titres in normal subjects, patients convalescent from streptococcal infections and patients with active rheumatic fever. From Quinn and Liao.[12]

ently than non-rheumatics to non-streptococcal antigens. Although not quite so clear now, further studies may help untangle the confusion.

Antibody response one month after 0.05 mg Pn I SSS

RHEUMATIC FEVER		NON-RHEUMATIC		RHEUMATIC HEART DIS.		NON-RHEUMATIC	
Age	Ab glob*	Age	Ab glob	Age	Ab glob	Age	Ab glob
14	.38	10	.59	28	1.12	23	1.33
12	.27	13	.57	23	0.52	21	1.31
11†	.23	9	.55	29	0.50	43	0.31
11	.23	6	.36	28	0.38	26	0.24
6†	.18	8	.27	31	0.25	25	0.18
14	.18	11	.20	22	0.20	21	0.17
13	.16	17	.18	20	0.06	22	0.13
9	.15	14	.12	20	0.02	26	0.12
18	.13	12	.12			27	0.09
5	.13					26	0.09
7	.12					38	0.07
						22	0.07
						21	0.07
Averages							
11	0.20	11	0.33	25	0.38	26	0.32

*Ab glob = mg anti PnI *gamma* globulin per 4 ml serum. Pre-immunization level subtracted from post.

Table 1

Quantitative precipitating antibody response to type I pneumococcal polysaccharide. From Quinn, Seastone, and Dickie.[13]

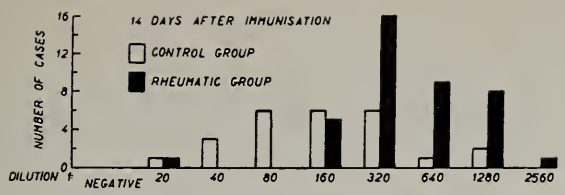
Relationship of rheumatic history and sensitization to tuberculin by BCG

	Rheumatic Heart Disease or Inactive Rheumatic Fever*				No History of Rheumatic Fever			
Time after BCG	2 weeks		1 month		2 weeks		1 month	
Tuberculin (OT)	1.0 mg		0.01		1.0		0.01	
Test read in hours	24	48	24	48	24	48	24	48
Av. diam of induration (mm)	Number of persons in each reaction-category							
0	1	7	1	3	4	17	1	4
5	4	1	0	3	3	0	1	9
10	2	2	4	2	3	1	5	4
13	1	0	2	0	0	2	4	1
15	0	0	1	1	1	1	5	1
20	5	1	4	3	7	0	2	0
25+	1	1	1	1	3	0	2	2
Total number of persons	14	12	13	13	21	21	20	21

Table 2

Sensitivity to old tuberculin following BCG immunization. From Quinn, Seastone, and Dickie.[13]

Antigenic stimuli like these just described are not really analogous to what happens in streptococcal infections and rheumatic fever where probably all school children have had at least one and possibly several previous streptococcal infections. In the previous experiments, the antigens used were some to which the individual had not been exposed previously. It seemed logical then to use antigens to which the individual had been previously exposed, then the administration of the antigen would be in the nature of a booster dose, a situation which is similar to what happens in repeated streptococcal infections. The work of Kuhns and Pappenheimer[16] suggested another antigen-antibody system in studying this problem. This system was employed by Kuhns and McCarty[17] and by Quinn.[18] Essentially the method consisted of administering diphtheria toxoid to Schick-negative rheumatic and non-rheumatic individuals and measuring the antibody response quantitatively. The findings of these two investigations were essentially the same, namely that children and young adults with rheumatic fever did not respond to a booster dose of diphtheria toxoid in a manner which was significantly different from non-rheumatics when increase in cir-



Agglutinin Response to Brucella Antigen

Figure 4. Agglutinin response to Brucella Antigen. From Padovcova, Rejholec, Suda and Wagner.[15]

culating diphtheria antitoxin is the criterion of response. Tables 3 and 4 demonstrate the findings in the latter of these two studies. Kuhns and McCarty suggested also that the production of non-precipitating, skin-sensitizing antibodies was not essentially different in rheumatics and non-rheumatics. Although the study by Quinn showed no significant production of non-precipitating, skin sensitizing antibodies by either group of subjects, these two investigations certainly suggest that rheumatics do not respond to a booster dose of diphtheria toxoid in a manner different than non-rheumatics. It is tempting to suggest also that rheumatics would not respond any differently than non-rheumatics to any non-streptococcal antigen when it is administered in the form of a booster, but there is no evidence that this is so. All that one can say is that when booster doses of such commonly used vac-

RHEUMATIC SUBJECTS

No.	Name	Age	Sex	Diagnosis	Pre-Booster Antitoxin Titre in Units Per Ml.	Post-Booster Antitoxin Titre in Units Per Ml.	Post-Booster Units of Pptn. Antitoxin Per Ml.	Ratio of in vivo to Pptn. titres	Diphtheria Toxin Remaining After pptn.	Dilution of Serum required to fix 2 full units complement
1	S.E.	11	F	R.H.D.-A.	< 0.1	<1	0.9	about 1	+	Q.N.S.
2	L.M.	12	F	R.F.-A.	< 0.1	2	0.3	7	0	No C.F.
3	M.B.	16	F	R.H.D.-I.	< 0.1	3	0.8	4	0	? 1:10
4	P.L.	5	F	R.F.-A.	< 0.1	5	2.2	2.3	0	Anti C.
5	T.P.	9	F	R.F.-A.	0.1-1.0	8	1.4	6	4	No C.F.
6	G.R.	14	M	R.F.-I.	< 0.1	8	3.8	2.1	+	1:5
7	A.B.	15	M	R.F.-I.	< 0.1	8	1.8	4	0	No C.F.
8	S.C.	8	F	R.F.-A.	0.1-1.0	15	4.8	3.1	0	1:5
9	P.D.	13	M	R.H.D.-I.	< 0.1	15	2.2	7	+	1:5
10	P.L.	6	F	R.H.D.-A.	1-5	15	6.7	2.2	0	Anti C.
11	A.B.	8	F	R.F.-A.	1-5	25	10.2	2.5	0	Anti C.
12	H.P.	14	F	R.H.D.-I.	< 0.1	40	21.8	1.8	?	Q.N.S.
13	H.D.	9	F	R.H.D.-A.	< 0.1	50	8	6	0	1:5
14	W.B.	15	F	R.H.D.-A.	< 0.1	55	4.5	12	+	Anti C.
15	R.A.	11	F	R.F.-A.	< 0.1	55	6.4	9	0	1:10
16	G.B.	8	F	R.F.-A.	0.1-1.0	55	20	2.8	0	1:20
17	C.E.	22	M	R.F.-A.	0.1-1.0	55	34	1.6	0	1:20
18	E.D.	14	M	R.H.D.-A.	0.1-1.0	65	1.0	65	+	No C.F.
19	S.C.	12	M	R.H.D.-A.	0.1-1.0	125	62.8	2	0	1:160
		Ave. 11.1				Ave. 32 Med. 15	Ave. 10.2 Med. 4.5	Ave. 3.1		

R.F.—Rheumatic Fever
R.H.D.—Rheumatic Heart Disease
I.—Inactive
A.—Active
Q.N.S.—Quantity Not Sufficient
No C.F.—No Complement Fixation
Anti C.—Anti Complementary
Pptn.—Precipitating

Table 3
Diphtheria antitoxin response to diphtheria toxoid in Rheumatic Subjects. From Quinn.[18]

NON-RHEUMATIC SUBJECTS

No.	Name	Age	Sex	Diagnosis	Pre-Booster Antitoxin Titre in Units Per.Ml.	Post-Booster Antitoxin Titre in Units Per.Ml.	Post-Booster Units of Pptn. Antitoxin Per Ml.	Ratio of in vivo to Pptn. titres	Diphtheria Toxin Remaining After pptn.	Dilution of Serum required to fix 2 full units of complement
1	S.S.	16	M	N.R.	< 0.1	< 1	1.3	about 1	+	Anti C.
2	S.J.	10	M	N.R.	< 0.1	< 1	0.6	0.6	0	No C.F.
3	G.S.	15	F	N.R.	0.1-1.0	4	3.5	1.1	0	No C.F.
4	W.P.	10	F	N.R.	0.1-1.0	5	1.7	2.9	0	Q.N.S.
5	H.E.	10	M	N.R.	1-5	8	1.0	8	0	Q.N.S.
6	B.B.	15	F	N.R.	< 0.1	8	4.1	2	0	1:5
7	W.C.	14	M	N.R.	0.1-1.0	10	1.3	8	0	Anti C.
8	P.B.	11	M	N.R.	< 0.1	10	0.8	12	0	Anti C.
9	H.G.	17	F	N.R.	< 0.1	10	2.0	5	0	Q.N.S.
10	H.H.	8	M	N.R.	≈ 0.1	15	6.1	2.5	+	1:10
11	D.W.	6	M	N.R.	0.1-1.0	15	0.6	25	0	No C.F.
12	A.C.	15	M	N.R.	< 0.1	15	1.5	10	0	Anti C.
13	M.D.	15	F	N.R.	0.1-1.0	25	12	2.1	0	1:10
14	W.R.	11	M	N.R.	< 0.1	30	13.2	2.3	?	Q.N.S.
15	R.C.	10	M	N.R.	< 0.1	45	18.5	2.4	0	1:10
16	W.C.	8	F	N.R.	< 0.1	55	19.6	2.8	0	1:10
17	P.W.	15	M	N.R.	< 0.1	55	16.5	3.3	+	1:20
18	B.D.	14	M	N.R.	< 0.1	55	23.6	2.3	0	1:160
		Ave. 12.2				Ave. 20 Med. 12.5	Ave. 7.1 Med. 2.75	Ave. 2.8		

N.R.—Non-Rheumatic

Q.N.S.—Quantity Not Sufficient
No C.F.—No Complement Fixation
Anti C.—Anti Complementary
Pptn.—Precipitating

Table 4

Diphtheria antitoxin response to diphtheria toxoid in non-rheumatic subjects. From Quinn.[18]

cines as typhoid, tetanus, smallpox or poliomyelitis are administered, clinical experience would leave one with the impression that rheumatics do not react any differently than those who have never had rheumatic fever.

Perhaps it is futile to argue this point because one can not escape the question "what do bacteria other than the hemolytic streptococcus or viruses or non-streptococcal antigens have to do with rheumatic fever anyway?" The answer today would have to be —"They have nothing to do with rheumatic fever." The crucial question would seem to be: "do rheumatics respond differently to streptococcal infections or antigens than non-rheumatics?" Earlier in this paper several references were cited all of which agreed that the rheumatics as a group do respond with higher antibody titres than do those recovering from streptococcal infections without getting rheumatic fever. Some of the objections to accepting these findings as evidence of a fundamental difference in rheumatics were also discussed. At the present time it is not possible to know in retrospect how many previous streptococcal infections any given individual has had nor is it often possible to tell when he had his most recent infection, but the results of Rantz and his colleagues[19] and others certainly make it clear that children have numerous streptococcal infections. These factors of course would influence antibody response.

Fortunately, it is possible to challenge individuals with streptococcal antigens and thereby eliminate the criticism of unequal doses of antigen. Whole streptococci have been administered in various kinds of vaccine in the past and for awhile immunization against scarlet fever was popular but no quantitative measurements of antibodies seem to have been made following their administration so that there has been no information on which to form an answer to this crucial question. However, a recent investigation has attempted an answer to the question of whether rheumatic individuals respond to streptococcal antigens in a different manner than non-rheumatic individuals.[20] In this experiment doses of streptolysin "O" concentrate were administered intramuscularly to a group of children with rheumatic fever and a group of non-rheumatic children. Antistreptolysin "O" titres were determined at three weeks. The results shown in figure 5 although not striking in the bar graph, when analyzed indicate that the children with rheumatic fever responded as a group with significantly higher antistreptolysin "O" titre rises than non-rheumatic children following equivalent doses of streptolysin "O". These findings although suggestive would be of greater significance if all of the rheumatic children and none of the non-rheumatic children had reacted in this manner, but perhaps this is too much to expect. If rheumatic subjects are all fundamentally different in the manner in which they respond to streptococcal infections or antigens it might be expected that all or nearly all of them would exhibit higher antibody rises. There was another result of this experiment with an even more significant difference. Six of 20 of the rheumatic children exhibited a marked local and systemic reaction to the streptolysin "O" concentrate whereas only one of 55 non-rheumatic children showed this kind of response. The meaning or the cause of these differences are not clear but the explanation does not necessarily lie in any fundamental difference in the manner in which rheumatic children respond to streptococcal antigens. The response will certainly be influenced by the individual's past experience with the hemolytic streptococcus, especially the number and frequency of infections, possibly

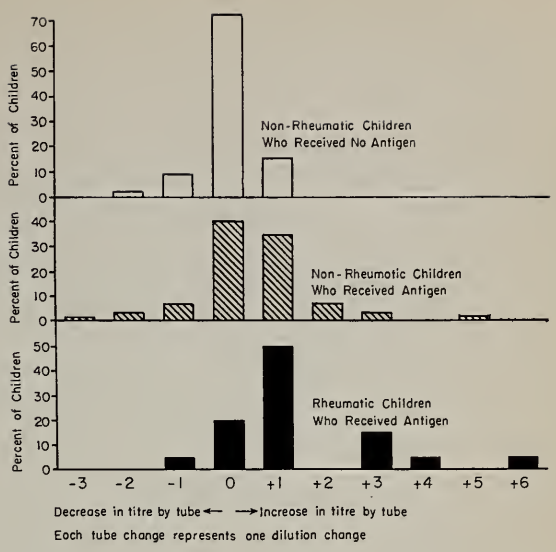


Figure 5. Percentage distribution of rise, no change and decrease in antistreptolysin "O" titres in rheumatic and non-rheumatic children three weeks following the injection of antistreptolysin "O" concentrate. From Quinn.[20]

also severity of the infection and nowadays the kind of treatment received. The information about past streptococcal infections necessary to make a complete evaluation of this experiment is not available nor would it be available for any study of this kind done in retrospect. However, the results do support previous clinical observations that rheumatic children frequently, but not always, respond with higher antibody levels following a hemolytic streptococcal infection than do non-rheumatic children.

Now, where does all this leave us? Well, we must admit that today no so-called "rheumatogenic substance" of the hemolytic streptococcus has been shown to exist and no clear-cut fundamental difference in host response to streptococcal or non-streptococcal antigens has been demonstrated. Perhaps we have been measuring the wrong kind of host response or the wrong kind of antibody or the wrong characteristic of the hemolytic streptococcus. Is there any way out of the present state of confusion? Yes, there probably is but it will require the application of different immunologic theories and techniques and painstaking careful epidemiologic studies of the horizontal, ongoing type rather than the kind which is done in retrospect or is concerned only with the present.

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Vanderbilt University School of Medicine, Nashville, Tennessee

Annual Fall Alpha Omega Alpha Lecture

October 11, 1961 **4:00 p.m.**

Auditorium

University of Oklahoma School of Medicine

800 N.E. 13th Street

Guest Lecturer

John Caffey, M.D., pediatric radiologist,

Denver, Colorado

ABSTRACTS

Mechanism of Immune Lysis of Ehrlich Ascites Tumor Cells

ANTON LINDER*

American Journal of Clinical Pathology 34: 426-433, November 1960

Mice bearing Ehrlich ascites tumor were treated with immune gamma globulin and guinea pig complement on the fourth, fifth, and sixth days after tumor transplantation. Tumor growth was inhibited as a result of the cytotoxic action of antibody and complement. Lysis was observed in approximately 70 per cent of the tumor cells, which were also conspicuously enlarged and swollen. These cells revealed the space between the nucleus and the cell membrane to be widened, but empty of basophilic material (RNA), which apparently had permeated the cell membrane, and was observed attached to the outside of the cell, appearing as a fringe of darkly staining basophilic material. This same pattern was observed when the cells were stained for protein.

Fluorescent staining with labeled immune gamma globulin revealed fluorescence at the site of the cell membrane, suggesting antigen-antibody reaction at the cell surface.

*Associate Professor of Pathology and Director Cytology Laboratory, University Hospital.

Response to Cortisone Predibetes Glucose- and Steroid-Glucose Tolerance in Subjects Whose Parents Are Both Diabetic

KELLY M. WEST*

Diabetes, 9: 379-385, Sept.-Oct., 1960

Subjects whose parents were both diabetic were studied with respect to glucose tolerance and cortisone-glucose tolerance. The status of glucose tolerance was known or tested in forty-six of these individuals whose ages averaged thirty-seven years.

In fourteen (29 per cent) glucose tolerance was impaired. These data were compatible with the notion that the incidence of genetic susceptibility to diabetes in this group approaches 100 per cent.

Cortisone-glucose tolerance tests were performed in twenty-six persons with normal glucose tolerance whose parents were both diabetic. Their responses to cortisone were not significantly different from those of a control group with normal glucose tolerance and no family history of diabetes. Seven other subjects whose parents were both diabetics were not tested after glucose alone, but had steroid-glucose tolerance tests. Four had cortisone-glucose tolerance tests and three had prednisone-glucose tolerance tests. The results of all seven tests were normal.

Cortisone-glucose tolerance tests were performed in twenty-six subjects with slight impairment of glucose tolerance. Their responses to cortisone were normal.

These findings suggest that individuals with prediabetes are not unusually responsive to the hyperglycemic effects of cortisone when it is administered by the technic of Fajans and Conn.

*Assistant Professor of Medicine.

Symmetric Peripheral Gangrene In Pneumococcal Sepsis

RICHARD E. BETTIGOLE*

Annals of Internal Medicine, 54: 335-342, Feb. 1961

A case of symmetric perpheral gangrene complicating pneumococcal pneumonia and meningitis is presented, and the theory is proposed that this phenomenon may be due to a fortuitous combination of many predisposing factors, including extreme dehydration and previous cold injury. Possible means of attempting to avoid this condition and of treating it are discussed.

*Resident in Department of Medicine, University Hospital.

Disease As a Way of Life: Neural Integration in Systemic Pathology

STEWART WOLF*

Perspectives in Biology and Medicine 4: 288-305, 1961

*Professor of Medicine, Consultant Professor of Psychiatry, Neurology, and Behavioral Sciences.

Utilization of Serum a_1-Globulin and Glycoprotein by Diplococcus Pneumoniae

YU-TEH LI* and M. R. SHETLAR**

Proc. Soc. Exptl. Biol. Med. 106: 398-400, 1961

When serum samples were incubated with a rapidly growing strain of **Diplococcus pneumoniae**, striking decreases of serum glycoprotein and consistent decreases of protein resulted. Paper electrophoretic studies indicated that these changes were largely restricted to the a_1-globulin fraction. It would appear that this strain of **Diplococcus pneumoniae** preferentially uses glycoproteins found in the a_1-globulin fraction of mammalian serum.

*Graduate Student, Department of Biochemistry.
**Professor of Biochemistry.

Estimation of Coronary Blood Flow by an Externally Placed Scintillation Detector

GUNNAR SEVELIUS* and PHILIP C. JOHNSON**

Proc. Okla. Conference Radioisotopes in Agriculture **TID-7578:** 269-274, 1960

A new method for measuring coronary blood flow has been developed. This method makes use of a scintillation detector of monitors on the chest wall and the time dilution curve of radioactivity during its first passage through the heart chambers and through the myocardium. The values obtained compare favorably with the values obtained by standard methods and in a flow model. Significant differences have been found between patients with and without myocardial infarctions.

*Research Fellow in Medicine.
**Radioisotope Laboratory, Methodist Hospital, Houston, Texas.

Defective Synthesis of Triglyceride Fatty Acids from 1-C-14 Acetate in the Well-Controlled Stable Adult Diabetic

ALLEN R. HENNES* and TOMMY W. REDDING**

Diabetes, 10: 85-89, March-April 1961

The synthesis of plasma lipids from I-C-14 acetate has been studied in nondiabetic subjects and in diabetics controlled with long-acting insulin. Lipids were fractionated on silicic acid columns.

1. No diabetic was found to synthesize more than normal amounts of plasma-free cholesterol from I-C-14 acetate. In fact, two of the five diabetics synthesized less than normal amounts of plasma-free cholesterol.

2. All diabetics showed a striking decrease in synthesis of plasma triglyceride fatty acids.

3. These abnormalities occur despite a normal fasting blood sugar.

4. The presence of a normal fasting blood sugar and normal plasma lipid levels does not indicate that the lipid metabolism of the diabetic is normal.

*Assistant Professor in Medicine.
**Biochemist, Laboratories, Veterans Administration Hospital, Oklahoma City.

Chairmen of Three Basic Science Departments Named

Three new chairmen of basic science departments will assume duties at the School of Medicine this summer and fall.

Marion deVeaux Cotten, Ph.D., formerly of Emory University School of Medicine, is newly-appointed professor and chairman of Pharmacology.



COTTEN

Francis J. Haddy, M.D., Ph.D., of Northwestern University, came to the school September 1 as professor and chairman of Physiology, and associate professor of medicine.

In the Department of Microbiology, L. Vernon Scott, D.Sc., professor and a faculty member since 1950, succeeded Martin M. Cummings, M.D., as chairman when the latter left July 1 to become chief of the National Institutes of Health's new office of International Research.

Doctor Cotten has been an associate professor in the departments of pharmacology and physiology at Emory since 1957. He received his Ph.D. from the Medical College of South Carolina in 1952, remained there two years as a research associate, later taught at Tulane University School of Medicine and was on the staff of the National Heart Institute, Bethesda, Maryland, before going to Emory. Doctor Cotten's appointment was effective July 1.

Richard W. Payne, M.D., has served as Pharmacology chairman since Paul W. Smith, Ph.D., resigned January 1 to join the Civil Aeromedical Research Institute staff.

Doctor Haddy will succeed M. Jack Keyl, Ph.D., who has been acting as Physiology chairman following the resignation last year of A. N. Taylor, Ph.D., now with the American Medical Association. The new chairman has been a member of the Northwestern faculty eight years. His present title is assistant professor of medicine and physiology and assistant director of professional services for research, VA Research Hospital. He received his M.D. in 1946 and the Ph.D. in 1953 at the University of Minnesota.

Menninger to Be Visiting Lecturer in Psychiatry

William Walter Menninger, M.D., on duty with the U.S. Public Health Service at the El Reno Federal Reformatory this year, has been appointed a visiting lecturer in psychiatry, neurology and behavioral sciences.

He will participate in undergraduate teaching and supervise the work of those Medical Center psychiatric residents rotating through the El Reno reformatory medical service.

Doctor Menninger is the son of William Menninger, M.D., one of the founders of the Menninger School of Psychiatry. After receiving his M.D. from Cornell University in 1957, Doctor Menninger interned at Boston City Hospital and took residency work at Topeka State Hospital and Menninger's.

Two other appointments to part-time teaching positions were made recently.

Michael Thomas Lategola, Ph.D., and Everett E. Phillips, Ph.D., both with the Civil Aeromedical Research Institute, were named associate and assistant professor of research physiology, respectively.

Pierce Named Instructor in Pediatrics

Alexander Webster Pierce Jr., M.D., has been added to the full time faculty of the School of Medicine as an instructor in pediatrics. A 1956 graduate of Vanderbilt University School of Medicine, he interned at Vanderbilt and took residency training at St. Louis Children's Hospital and Vanderbilt University Hospital.

SEARCH FOR TAX EQUITY

Professional men, particularly physicians, have been running from pillar to post for years in search of a fair shake on taxes. Long excluded from the tax benefits enjoyed by businessmen and others, the professions have explored three principal avenues of tax relief—special legislation for the self-employed, the creation of unincorporated associations which are taxable as corporations, and, more recently, the establishment of state laws to permit professional corporations.

This article seeks to shed at least a degree of light on a most complicated subject.

Caught in a tax regulation paradox, one which seems most unlikely in a democratic society, the self-employed have been paying more than their share of taxes into the Federal treasury. In attempting to provide financial protection for old age, the government has permitted inequalities in tax deferment to develop, with the result that persons with the same gross income are unable to prepare for retirement in the same way.

In 1942, the Federal Internal Revenue Code was modified to provide that employers may establish tax-exempt pension plans for their employees, either contributing the entire amount of the cost or sharing it with the employee. Companies may consider such contributions as a deductible item, and employees do not have to declare the employer's contribution as income. Upon retirement, the benefits to the employee are taxed according to his annual income at that time, which would generally be at a lesser rate.

Corporations have long been able to offer such advantages to key personnel such as officers, directors and shareholders, because corporate laws enable these persons to be classified as employees of the corporation. Sole proprietors and partners in non-professional occupations have been able to readily form a corporation and thereby qualify as employees.

Physicians practicing independently or as members of a partnership have been able to establish such plans *for their employees*, but, as *employers*, have been unable to participate themselves. This has been true because few state laws permitted professional corporations, and ethical considerations cast doubt on the wisdom of practicing medicine as a corporation.

The AMA clarified the ethical problem in 1957 when its House of Delegates recognized the propriety of physicians joining together as partners, associations or other lawful groups. The ethical test for such a group requires that ownership and management must rest with physicians.

With the preceding as background information, the following paragraphs are a progress report on the three routes being considered by physicians and other professional men in their search for tax equity.

Keogh Legislation

As a step in the right direction, the Jenkins-Keogh bill was introduced in Congress in 1951. Its purpose was to put some 11 million self-employed workers on a par with ordinary employees, by permitting them to set aside, tax free, a percentage of annual earned income into special retirement funds or annuities. After an encouraging start, the measure faltered in the Senate, just as similar bills have done in succeeding Congresses.

Presently, this year's model of the legislation, H.R. 10, is in the Senate Finance Committee, after having passed the House of Representatives. Since it is opposed by the Administration, and the tax deferment feature has never been too popular with the balanced-budget-minded committee, its chances of final passage this year are at best questionable.

The long range outlook for this type of legislation is good, however, and self-employed persons must keep H.R. 10 in mind as a definite possibility, weighing it against the other tax deferment alternatives described in this article. The present form of H.R. 10 will enable self-employed persons to deduct 10% of their incomes, up to $2,500 a year, provided they invest the sums in specified types of retirement plans.

Unincorporated Associations

In recent years, some physicians have acquired the tax status of "employees" by organizing unincorporated associations. This effort to acquire an equitable arrangement for tax deferred pensions resulted from the U.S. Court of Appeals ruling on the now famous Kintner Case.

Doctor Kintner and his associates were operating as a partnership in Montana and, since the state laws did not permit professional corporations, were unable to participate as employees in a tax-deferred pension plan. In order to obtain employee status, they re-organized as an unincorporated association which was so similar to a corporation that they contended it should be taxed as such. A pension plan was set up, but the Commissioner of Internal Revenue tried to tax the association's contributions as the personal income of the physicians.

The U.S. court ruled, however, that the association was taxable as a corporation and that its pension trust was qualified for tax exemption even though the physician-owners were included as participants. Internal Revenue conceded and agreed to establish criteria for determining whether an association could be taxed as a corporation, thereby qualifying for tax-deferred pensions.

Physician enthusiasm for this type program was dampened when the tax officials began a three year waiting game on drafting the final Kintner regulations. When they did appear, the practicability of forming Kintner-type associations was virtually scuttled.

In the opinion of the AMA Law Department, the final regulations amounted to nonacquiescence on the part of the Commissioner of Internal Revenue. This view was taken by AMA lawyers because the regulations provided that the classification tests would be determined to a certain degree by local laws, and most states have laws which would tend to deny a favorable ruling.

Here are the qualities which an unincorporated association must meet to be taxed as a corporation: (1) Continuity of Life. (2) Centralization of Management. (3) Limited Liability for Debts to Organization Property. (4) Free Transferability of Interest.

The Uniform Partnership Act (adopted by Oklahoma and most other states) appears to be in conflict with these criteria. For example, the provisions of this act cast doubt on the ability to establish an organization with continuity of life and centralization of management. While competent tax counsellors may be able to work their way around the conflicting statutes, there seems to be little reason to make this effort now, in view of the recent passage of Senate Bill 399, an act permitting Oklahoma professional men to incorporate.

Professional Corporation Act

The unincorporated association idea was primarily a device to fill a gap created by the absence of professional corporation laws at the state level. Oklahoma's Senate Bill 399, the Professional Corporation Act, was signed into law by Governor Edmondson on July 26th and is now available to physicians who feel they could benefit from operating as a corporation.

The declared purpose of the act is to make "available to professional persons the benefits of the corporate form for the business aspects of their practices while preserving the established professional aspects of the personal relationship between the professional person and those he serves."

Only persons duly licensed to practice a particular profession may file articles of incorporation, and the articles must state the profession to be practiced. Certificates from the regulatory board of the profession (Oklahoma State Board of Medical Examiners) must be attached to the articles, certifying that each of the incorporators, directors and shareholders are licensed to practice such profession.

The professional corporation may maintain its office in only one location, and a

doctor may only be an officer, director or shareholder in one professional corporation. Only licensed professionals may render professional services, but other employees may perform their customary duties.

Ownership of stock is restricted to those licensed in the profession for which the corporation is established. Shares may only be transferred to another licensed professional, then according to provisions in the corporate bylaws or by general agreement of the shareholders. If the shares are not transferred within ninety days after the departure of a shareholder, the corporation must purchase the shares at book value.

Advantages of a Corporation

1. The aforementioned pension plans as well as profit-sharing plans may be set up for employees—and officers, directors and shareholders would normally be considered "employees." The Internal Revenue Service has informally indicated that such would be possible. The corporate contributions to an approved plan would be deductible, and the doctor-employee would pay no tax on contributions made to the plan in his behalf or on the investment earnings of the plan. Upon retirement, the beneficiary would pay income tax on the proceeds.

2. Corporations with ten or less shareholders and having not more than 20% of income from interest, dividends, rent, etc., can be treated as tax-option corporations, the effect of which is to enable shareholders to pay individual income tax on proportionate shares of the corporate net income, rather than the corporation paying corporate tax.

3. Surplus corporate funds may be invested in real estate, mortagages, stocks, etc., and 85% of the dividend income is tax-exempt. This feature is not available, however, to tax-option corporations.

4. Fringe benefits to employees, such as life insurance, are deductible items to the corporation and the current protection is not taxable to the employees.

5. Although the corporation is jointly liable for the negligent acts of a shareholder, other shareholders are not personally involved beyond their corporate investments.

6. A corporation may deduct salaries paid to widows or heirs of employees for a limited period. Also, it is possible that the recipient will not pay income tax on such gifts.

Disadvantages

1. Centralization of management may be an unpopular requirement in some instances.

2. The requirement to purchase stock of a deceased shareholder may be a financial burden to remaining shareholders or the corporation.

3. There may be increased problems with respect to filing tax returns.

4. It would be extremely difficult for one or two doctors to form a corporation since three directors (who must also be licensed physicians) are required. Thus, less than three incorporators would have to persuade other physicians to serve as directors and these other physicians would thereby surrender their right to be involved in their own corporation. Also, it could be difficult for a one-man corporation to obtain an approved, tax-deferred pension plan.

Summary

Since the Keogh-type legislation is not presently available to professional men, and since the Kintner-type unincorporated association has been complicated by restrictive regulations, physicians who desire to establish tax-deferred pension or profit-sharing plans will probably have to incorporate the business aspects of their practices.

The decision to incorporate is a serious one, and physicians interested in doing so must weigh the advantages to be gained against the disadvantages they are sure to inherit under a corporate setup. The problems to be faced by one or two man corporations will require an even more careful evaluation of the changeover, particularly since there is no sure way of knowing at the present time whether or not an approved tax-deferred pension plan could be obtained for corporations with less than three incorporators.

The Professional Corporation Act may be of great advantage to certain doctors or

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'62 Annual Meeting— "Three Ring Circus"

Improved meeting facilities, a program featuring three simultaneous meeting rooms, and a "Town Hall" meeting for the public will punctuate several innovations in store for the 1962 annual meeting of the OSMA.

All scientific and social events of the Oklahoma City meeting will be moved into the facilities of the Skirvin Hotel and Skirvin Tower, eliminating the inconvenience of past years caused by splitting events between the hotel and the Municipal Auditorium. To further facilitate attendance, the meeting has been arranged for a weekend, beginning scientific events at noon on Saturday, May 5th, and concluding with the Inaugural Dinner-Dance on Monday evening, May 7th.

Diversified Program

A "Three Ring Circus" of scientific and socio-economic presentations has been arranged by Rex Kenyon, M.D., and his Program Committee. The "center ring" Venetian Room of the Skirvin Hotel is reserved for the presentations of eleven out-of-state speakers, and the smaller Regency and Monterrey Rooms will accommodate "side show" events on scientific subjects of special interest, as well as several presentations on economic problems.

Specialty societies are now in the process of selecting the visiting guest lecturers for the Venetian Room. Represented on the program will be the following specialties: Dermatology; Ear-Nose-Throat; Internal Medicine (2); Obstetrics-Gynecology; Pathology; Pediatrics; Psychiatry; Surgery (2); and, Urology. To date, three speakers have been confirmed: Willard E. Goodwin, M.D., University of California—Urology; Lawrence J. McCormack, M.D., Cleveland Clinic—Pathology; and James H. Ferguson, M.D., University of Miami—Obstetrics and Gynecology.

The scientific presentations in the smaller rooms will be staged by local talent and will feature special-interest discussions on such subjects as urology, obstetrics-gynecology, surgery, medicine and pathology. Plans for these rooms also include a "Socio-Economic Indoctrination Course," and seminars on "Investments" and "Legal and Tax Problems."

Movie Star Here

As a special public relations attraction of the meeting, Hollywood's Ronald Reagan will address a public forum on Sunday night, May 6th, in Oklahoma City's Municipal Auditorium. Reagan, popular motion picture and television star, has recently become noteworthy for his public appearances on behalf of conservatism in government. It is expected that he will blast socialized medicine during his Oklahoma City talk, as he has done on many other occasions.

The Oklahoma County Medical Society will co-sponsor the event with the OSMA. Tickets for Reagan's appearance will be distributed to the public by the members of the association.

Fireside Conferences

Saturday evening has been set aside for dinner meetings of related medical organizations. For those groups which conclude their special meetings in time, and for all other interested members of the OSMA, the American College of Chest Physicians will conduct six "Fireside Conferences" in the Venetian Room of the Skirvin beginning at 8:15 p.m.

These conferences are a new concept of professional education, and have been popularly received at AMA and state medical association meetings. Roundtables will be set up to accommodate about ten physicians each, and each table will have qualified discussion leaders to direct informal conversation about recent advances in diagnosis and treatment of a particular type of cardiopulmonary disease. Topics selected for the six tables are: "Management of Emphysema," "Treatment of Coronary Disease," "Modern Treatment of Tuberculosis," "Treatment of Hypertension," "Rheumatic Heart Disease," and "Bronchogenic Carcinoma."

Physicians will be able to move from table to table and discuss their problems with experts in the six subjects. Beer and soft drinks will be served by the chest physician group.

Other Events

The Board of Trustees of the OSMA will meet on Friday afternoon and evening, May 4th, and the House of Delegates will convene at 10 a.m. on Saturday, May 5th, for an all-day encounter with the business affairs of Oklahoma medicine.

President Clint Gallaher, Shawnee, will wind up the meeting as well as his presidency on Monday evening when he hands the gavel to J. Hoyle Carlock, M.D., incoming president from Ardmore. The inaugural ceremonies will take place during the annual dinner-dance, scheduled to be held in the Skirvin Tower's Persian Room. Plans are now underway to arrange for top-talent entertainment at the dance.

The annual OSMA golf tournament will be conducted on Monday afternoon, but the site of the contest is still to be selected.

Search For Tax Equity

(Continued from Page 525)

groups of doctors, but it is not an advantage to every practitioner. It depends on the doctor's tax bracket, the amount of his professional income as compared to other income, and, very importantly, upon whether or not he has extra income available to divert into a retirement program. From a practical point of view, there is little advantage to be gained through incorporation unless the doctor or doctors are prepared to go further and create a pension or profit-sharing plan, or to take advantage of some of the other permitted acts.

Use of this law and the creation of pension and profit-sharing plans are both highly technical. It is suggested by the OSMA legal counsel that physicians first talk with their accountants, requesting that a study be made to determine the approximate tax savings to be realized through incorporation. If this preliminary study looks favorable, then the physicians' attorney should be contacted regarding the actual establishment of the corporation. The advice of a banker, actuary or accountant will also be necessary to properly develop a qualified retirement program and an insurance agent will have to be consulted regarding the insurance fringe benefits available to a corporation.

OSMA Files Statement Against H.R. 4222

During recent hearings on H.R. 4222, the administration's health care bill for Social Security recipients, the Oklahoma State Medical Association was among those introducing written testimony into the permanent record of the proceedings.

President Clint Gallaher, M.D., and Thomas C. Points, M.D., Chairman of the OSMA's Federal Legislative Committee, tried unsuccessfully to arrange for oral testimony against the controversial proposal. When the request for time was not granted by the House Ways and Means Committee, Doctor Points prepared a written statement outlining the long-standing viewpoint of the association toward using the OASI mechanism as a vehicle to socialize medical care for a segment of the population.

The statement was sent to Representative John Jarman (5th Congressional District, Oklahoma) who transmitted it to Representative Wilbur Mills (Arkansas), Chairman of the Ways and Means Committee.

The OSMA's statement is printed in full below:

August 1, 1961

The Honorable Wilbur Mills, Chairman
House Ways and Means Committee
House Office Building
Washington 25, D. C.
Dear Mr. Chairman:

The Oklahoma State Medical Association appreciates the opportunity to introduce this written testimony into the permanent record of the public hearings being held on H.R. 4222 (The Health Insurance Benefits Act of 1961).

At the outset, may it be clearly established that the members of our voluntary professional society of over 1,700 doctors of medicine are firmly and unitedly opposed to this legislation. Our collective attitude toward this bill is not an arbitrary one; we oppose H.R. 4222 as a matter of principle, and as a matter of fact.

H.R. 4222 is purely and simply the beginning of socialized medicine in the United States. It will socialize hospital, nursing

home and medical care for a segment of the population, and more importantly, it provides the framework for rapid expansion to cover Americans of all ages. Many of its supporters, including the Socialist Party, are predicting and advocating such a course of events.

Thus, if Congress enacts H.R. 4222, American medicine will be taking a backward step from its present role of world leadership in health care. The experience of other countries which have adopted compulsory health care ranges from poor to unimpressive, and it would be tragic for the United States to scuttle a superior system in favor of a lesser one.

Aside from the ill-advised principle involved, no proven need for H.R. 4222 has been shown. On the contrary, the Kerr-Mills law is meeting the need of the indigent elderly much more effectively and economically than would the bill under consideration. Kerr-Mills embodies the principle of local responsibility and control; and it is designed to help those who need help.

Kerr-Mills programs are being implemented at a rapid rate by state governments, and, if given the opportunity of a fair trial, will soon result in a nationwide network of health care programs for Old Age Assistance (welfare) recipients and Medical Assistance for the Aged (near needy) recipients.

Our experience in Oklahoma with the Kerr-Mills law has been most heartening. The table below summarizes this experience since October, 1960, when our Department of Public Welfare implemented the MAA program and expanded benefits to OAA recipients.

Table of Experience
OAA and MAA Programs
From November, 1960 through June, 1961

	OAA	MAA
Persons Eligible	95,311	20,000 (estimate)
Persons Cared For	27,503	1,019
Total Cost (8 months)	$5 million	$210,000
Cost Per Case	$183.67	$206.13

These figures are even more significant when it is realized that about 50% of the state's over-65 population is covered by the OAA and MAA programs. Moreover, nearly a third of Oklahoma's over-65 people have coverage through voluntary health insurance plans. Still more are qualified to receive help through other health care programs, or are financially independent. Oklahoma medicine considered it a privilege last year to contribute over $7 million in health care service for those unable to pay.

Therefore, through a variety of means, Oklahoma's senior citizens are now able to receive high quality health care, when and where they need it. To pre-empt a proven, flexible system with H.R. 4222 would be a costly misadventure.

The adoption of the compulsory health care principle would not only deteriorate the quality of health care in the United States, but it would also mark the beginning of the end for the health insurance industry, and destroy the initiative of individual citizens and local governments who are now rising to meet the challenge of aging through local means.

Among the voluntary projects underway in Oklahoma, is a permanent Commission on Aging, now in its formative stages. Another project, indicative of a responsive public, is a multi-million dollar Senior Citizens Village, soon to be constructed in Oklahoma City. In addition, cities throughout the state have created special committees for the purpose of adding comfort and meaning to the lives of the elderly.

These programs will wither before they bloom if the Federal government tries to assume complete jurisdiction of the aged through further taxation.

Let us keep in mind, Mr. Chairman, that heavy Federal taxation has already thwarted the potential of local governments to take care of their own. Furthermore, promiscuous government spending and the resultant inflation, have thwarted the ability of our old folks to take care of themselves. At best, H.R. 4222 would not even be a short-term panacea.

Your committee is urged to join the physicians of Oklahoma (and the many others) who oppose this dangerous legislative proposal. H.R. 4222 would unnecessarily drain another $12-$15 million annually from the

pockets of Oklahoma taxpayers, to ostensibly fill a need already being met. It would nurture federal dependency and public apathy at a time when enthusiasm for local action is running high.

The American people have been regimented enough under the guise of social legislation.

Sincerely yours,
/s/ Thomas C. Points, M.D., Chairman
Federal Legislative Committee
TCP:md

AMA Clinical Meeting Set Nov. 26-30 at Denver

The 15th annual clinical meeting of the American Medical Association will be held November 26-30 at Denver, with a program geared to basic problems of medicine faced by physicians in their practice.

An outstanding scientific program, with emphasis on new research developments, has been planned under the direction of Samuel P. Newman, M.D., Denver, chairman of the AMA's Council on Scientific Assembly.

Some highlights will include sessions and papers on such important areas of medicine as genes and chromosomes, electronics and computers in medicine, space medicine, medical aspects of American habits, new developments in virology, treatment of radiation injuries, new findings in chemotherapy for cancer and latest data in the field of antibiotics and antigens, Doctor Newman said.

With more and more nuclear reactors coming into use all over the nation, many practicing physicians soon may begin to face the problem of treating injuries from radiation accidents, the chairman said.

A section of internationally known experts in the treatment of radiation injuries will offer three major papers in this important new area of medical care. Chairman will be Marshall Brucer, M.D., chairman of the medical division, Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee.

The radiation experts will discuss such topics as "Potential and Probable Sources of Radiation Accidents," "Diagnosis and Pathology of Radiation Injury" and "Treatment and Prognosis of Radiation Injury." Participants will include researchers from Los Alamos and Oak Ridge, the Office of the Surgeon General and the University of Chicago.

The age of advancing physical science also offers new findings to medical science: the use of electronics and computers in medicine. Chairman of this section at the Denver meeting will be A. H. Schwichtenberg, M.D., head of the department of aerospace medicine, Lovelace Foundation for Medical Education and Research, Albuquerque, New Mexico.

Computer systems for recording medical data to aid the physician in his diagnosis and prognosis will be discussed. Topics will include "The Future of Electronics in Medicine," "Microelectronics and New Concepts of Bioinstrumentation," "A System for Medical Data Recording," and "Biological Computers."

The virus, one of the most complex problems facing the clinician, will be the subject of a series of papers by outstanding specialists. Jonas E. Salk, M.D., Pittsburg, originator of the killed virus polio vaccine, will give a paper on "Immunization Against Virus Diseases." Other topics will include "The Nature of the Virus and Its Cellular Reaction," "Smallpox Vaccination Complications," "Virus Hepatitis" and "Identification of Viruses."

"We are confident that the 15th annual clinical meeting will offer one of the most interesting and informative programs ever presented at the winter session," Doctor Newman said.

"The program is designed to assist the physician in his practice. The latest findings in many areas of medicine will be presented by men who are top specialists in their fields. The meeting will be of great value to the clinician in advancing his knowledge."

Fall Conference Planned By OC Clinical Society

The Oklahoma City Clinical Society will open its thirty-first annual three-day fall conference at the Sheraton-Oklahoma Hotel on October 23, 1961.

The excellent program of postgraduate teaching will include lectures and discussions by fifteen noted guest speakers, selected from various medical and teaching centers throughout the nation. In addition to the general assemblies there will be specialty lectures, a clinical pathologic conference and daily roundtable luncheon question and answer sessions.

Special Features

Entertainment will include a banquet on Monday evening, October 23rd, when the Oklahoma County Medical Society will host guest lecturers and out-of-town doctors. James Q. du Pont, nationally known lecturer and administrative assistant of the E. I. du Pont de Nemours & Company, Wilmington, Delaware, will be the principal speaker of the evening. On Tuesday evening, a social hour will be followed by eight specialty group dinners. Climaxing the three-day conference, the annual dinner-dance, jointly sponsored by the Oklahoma City Chamber of Commerce and the Oklahoma City Clinical Society, will be held at the Skirvin Tower Hotel on Wednesday evening, October 25th.

Speakers Named

Guest lecturers who have accepted an invitation to speak before the group are: Ivan D. Baronofsky, M.D., (surgery) San Diego, California; Edwin W. Cocke, Jr., M.D., (otolaryngology) Memphis, Tennessee; Bentley P. Colcock, M.D., (surgery) Boston, Massachusetts; Charles W. Daeschner, Jr., M.D., (pediatrics) Galveston, Texas; Douglas M. Haynes, M.D., (gynecology) Louisville, Kentucky; Walter M. Kirkendall, M.D., (medicine) Iowa City, Iowa; Charles P. Larson, M.D., (pathology) Tacoma, Washington; E. Perry McCullagh, M.D., (medicine) Cleveland, Ohio; Donn G. Mosser, M.D., (radiology) Minneapolis, Minnesota; Robert E. L. Nesbitt, Jr., M.D., (obstetrics) Albany, New York; Edward W. D. Norton, M.D., (ophthalmology) Miami, Florida; Donald L. Rose, M.D., (physical medicine) Kansas City, Kansas; Ian M. Thompson, M.D., (urology) Columbia, Missouri; Charles E. Wells, M.D., (neurology) Nashville, Tennessee; and Jack K. Wickstrom, M.D., (orthopedics) New Orleans, Louisiana.

Registration fee for the meeting is $20.00. This includes all features during the three-day clinical. An invitation is extended all physicians who are members of their county medical societies. Further information may be obtained from Mrs. Alma O'Donnell, Executive Secretary, Oklahoma County Medical Society, 503 Medical Arts Building, Oklahoma City.

Medical Assistants to Meet in Reno

New wonder drugs, medical quackery, future training programs and professional liability are among the subjects to be considered by medical assistants when they gather October 13-15 at Reno, Nevada, for the fifth annual convention of the American Association of Medical Assistants.

More than 1,000 assistants are expected to attend the meeting at the Holiday Hotel to hear talks by physicians, professional management experts, educators and officials from governmental, pharmaceutical and military fields.

Speakers slated for the event include: Leonard W. Larson, M.D., president of the American Medical Association; Horace Cotton, contributing editor of Medical Economics; Austin Smith, M.D., president, American Pharmaceutical Association; and Oliver Field, director of the AMA's Bureau of Investigation.

The AAMA has a national membership of 9,500 women and is operating through thirty state chapters. More than 200 Oklahoma doctors' employees belong to the state chapter, headed by President Gerry Schwarz, assistant in the office of Doctors Wilkins, Herrmann and Rix, 525 N.W. 11th, Oklahoma City. Further information on the Reno meeting may be obtained from Miss Schwarz.



President Peter E. Russo, M.D., honoree Eugene Pendergrass, M.D., and Program Chairman Morris H. Levine, M.D. (from left), are shown as they review the program of the 23rd meeting of the Rocky Mountain Radiological Society.

Russo Completes Year As X-Ray Leader

Vice-President of the Oklahoma State Medical Association, Peter E. Russo, M.D., concluded his year as president of the Rocky Mountain Radiological Society when he presided at the 23rd midsummer conference of the group, held August 10-12 in Denver.

The society is comprised of radiologists throughout the Midwest, and meets each August for a scientific, business and social program. The 1961 event, held at Denver's Hilton Hotel, was attended by 250 radiologists.

Pendergrass Honored

Highlighting the scientific program of the recent meeting was the day-long tribute paid to pioneer radiologist Eugene Pendergrass, M.D., Philadelphia. Fourteen former residents of Pendergrass presented the program for the day. In addition, an Estes Park reunion of the Association of Pendergrass Fellows attracted more than 100 physicians. Pendergrass retired in June after 43 years of teaching at the University of Pennsylvania School of Medicine.

Other events of the three day conference included additional papers on diagnostic and therapeutic advances in radiology, inspection of nearly forty scientific and technical exhibits, the annual business meeting and banquet and a post convention trip to the Central City Opera House.

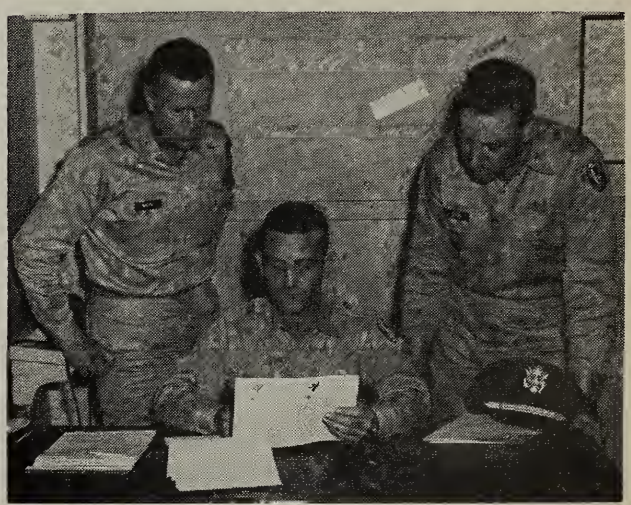
AMA to Stage Conference on Medical Aspects of Sports

The Third National Conference on the Medical Aspetcs of Sports, sponsored by the American Medical Association, will be held in Denver, Colorado, at the Cosmopolitan Hotel on November 26, 1961. The conference will be held in connection with the annual Clinical Meeting of the American Medical Association, November 26-30, 1961.

As was true of the previous conferences on this subject held in Dallas, Texas, and Washington, D.C., the Third Conference will cover a wide range of subjects. Included will be papers, panels, and discussions relating to training and conditioning, prevention of injuries, recognition referral and treatment of injuries, the psychology of sports participation and other subjects.

Those interested in receiving announcements concerning the conference should address the Secretary, Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

95th Medics



Colonel Henry Wolfe, Hugo, left, division surgeon, and Captain L. R. Diehl, right, Oklahoma City, assistant division surgeon, talk over medical plans for 95th Victory Division at Fort Chaffee, Arkansas, with Colonel William H. Reiff, Oklahoma City, division chief of staff. Colonel Reiff is also a physician in civilian life.

The 95th is one of thirteen reserve training divisions. Its mission is to operate a training center for 14,000 in the event of call up. At the Fort Chaffee summer encampment, Fourth Army gave the division an excellent rating.

Deaths

C. C. Young, Jr., M.D.
1905-1961

Fifty-five-year-old C. C. Young, Jr., M.D., Shawnee physician, died July 13.

Born in 1905 in Nashville, Tennessee, Doctor Young attended Vanderbilt University and received his doctorate from the University of Tennessee School of Medicine in 1932. His practice was established in Shawnee in 1937.

Active in medical activities, he had served as President of the Pottamatomie County Medical Society and was a Trustee from District VII of the Oklahoma State Medical Association.

Doctor Young was a Fellow in the American College of Surgeons and a member of the American Association of Railway Surgeons.

Rush L. Wright, M.D.
1882-1961

A former Director of LeFlore County Health Department, Rush L. Wright, M.D., died July 23, 1961 in Poteau, Oklahoma.

A graduate of Illinois Medical College in 1908, Doctor Wright practiced in Talihina for eight years where he served as visiting physician at the Indian Hospital before moving to Poteau.

After serving his community for over thirty years, he retired last July 1.

Doctor Wright had been secretary of the LeFlore County Medical Society.

Daniel M. MacDonald, M.D.
1891-1961

Daniel Marsh MacDonald, M.D., retired Tulsa obstetrician, died June 28 in Portland, Oregon, his home.

Born in Cleveland, Ohio, the 69-year-old physician graduated from Western Reserve University School of Medicine in 1916. After serving with the Army Medical Corps during World War I, he took graduate training in London and Edinburgh before moving to Tulsa where he practiced for 34 years. In 1955, Doctor MacDonald retired from active practice and moved to Portland.

Recognizing his service to the medical profession, the Oklahoma State Medical Association awarded Doctor MacDonald a Life Membership in 1957.

Hiram D. Moor, M.D.
1886-1961

Hiram D. Moor, M.D., former assistant dean of the University of Oklahoma School of Medicine, died August 23, 1961 in Oklahoma City.

A native of Plymouth, Vermont, Doctor Moor came to Oklahoma in 1920. He graduated from Rush Medical College in Chicago in 1929. In addition to having served as assistant dean, Doctor Moor was professor and chairman of the Department of Bacteriology at the University of Oklahoma School of Medicine.

Recognizing his service to the medical profession, the Oklahoma State Medical Association honored Doctor Moor in 1959 by presenting him with an Honorary-Life Membership.

Wilbur F. Bohlman, M.D.
1912-1961

Wilbur F. Bohlman, M.D., a Watonga physician since 1938, died August 23, 1961.

Doctor Bohlman graduated from the University of Oklahoma School of Medicine in 1937 and established his medical practice in Watonga the following year. After his service with the U.S. Army medical corps in the European theatre from 1942-45, he returned to Watonga.

Active in both medical and civic affairs, he had served as president of the Blaine County Medical Society and had been a member of the Watonga Board of Education for many years.

Auxiliary News

Fall Conference

As County Auxiliaries welcome each returning member and each new member this month, the State officers and committee chairmen welcome each of you. Fall is the "expectant" month; 1961-62 deserves much of our time and interest in the Auxiliary.

October 23rd is Fall Conference. Mark it now on your calendar. For those new mem-members, or those assuming new duties this year: annual Fall Conference is a combined training and get-acquainted event at the State Medical Building in Oklahoma City. At this time State officers, chairmen, and county presidents (the Executive Board) meet together following coffee and registration, with other county officers and committee chairmen to discuss business and to hear reports of current and future plans.

This is a fine way to meet and talk with the members with whom you will be working this year. Plan your car-pools and come!

Operation Coffeecup

During the summer our Legislative Chairman, Mrs. Clinton Gallaher of Shawnee, mailed folios of *Operation Coffeecup* to each Legislative Chairman or County President. In addition to the recording by Ronald Reagan and a commentary, you will find pertinent material from National, together with a list of senators and representatives from each state.

What is *Operation Coffeecup?* It is a sound plan, providing us with an opportunity to invite friends and neighbors in for coffee, to listen to Ronald Reagan, and to discuss trends specifically affecting every family, not just medicine in general.

Your own chairman or president has already started the coffee meetings. If you have been on vacation, or your first meeting has not yet been held, call now to reserve a convenient time for your coffee. When you do obtain the record, be certain to listen to it carefully and read the text. In the meantime, if you are not clear on legislative background, spend some time—it will prove rewarding—reading and reviewing the Forand Bill, the Kerr-Mills legislation, and the King Bill (HR-4222; referred to in the Senate at SB 909, the Anderson Bill.)

In a recent issue we made suggestions for effective discussion, particularly when legislation is concerned. Study and relax, knowing that your fore-knowledge and tolerance will be much more persuasive than the attitude: I am a doctor's wife, so naturally I oppose these measures. And don't forget: if you do not know the answer to any question, admit it; your friend will respect your honesty and be flattered when you take the trouble to secure correct information and telephone her.

One other advantage you should consider: if possible, know in advance the profession of each guest's husband, her own, if she has a profession. If you have not read the August 18, 1961, *OSMA-Scope,* do so now. Included in and following the report by Doctor Thomas C. Points, Federal Legislative Committee Chairman for the Oklahoma State Medical Association, are lists of those groups favoring and those opposing HR-4222. If we can influence individuals, obviously group attitudes can be challenged..

The title could be changed to *"Opportunity Coffeecup."* You will be pleased with the quality of the recording; you will be proud of your own contribution, maximum reward with minimum effort. You, along with your guests, will always remember Mr. Reagan's hauntingly true words: "Until one day, as Norman Thomas said, we will awake to find that we have socialism. And if you don't do this and if I don't do it, one of these days you and I are going to spend our sunset years telling our children and our children's children what it once was like in America when men were free."

25 YEARS AGO



Articles published in *The Journal* of the Oklahoma State Medical Association, September, 1936.

EDITORIAL

An Important Responsibility Highway First Aid Stations

The plan for highway first aid stations, which was first promulgated by the Fracture Committee of the American College of Surgeons and later adopted as a major activity of the American Red Cross, should receive not only the endorsement but the full cooperation of County Medical Societies.

The expense of these units is met by the local Red Cross Chapter and amounts to but a few dollars for standard equipment. The locations of the units are determined by a committee appointed by the Chairman of the local Red Cross organization and are usually placed at filling stations, tourist camps or rural stores where the services of a physician are not readily available.

It is required that the personnel of these aid stations take a fifteen hour course of instruction comprised of splint application, hemorrhage control, artificial respiration, et cetera, this course to be under competent direction and the applicant at the termination of the course must submit to an examination and demonstrate his efficiency.

These units also will have at hand information as to procuring medical attention, ambulance service and hospitalization in order that prompt disposition may be made of all emergency cases.

There is no question but what the installation of these units throughout the state will materially decrease both morbidity and mortality and the County Medical Society will be meeting its obligation to the traveling public by contacting the officers of their local Red Cross Chapter and giving their support to carrying out this very important program.

The American Board of Internal Medicine (Inc.)

The American Board of Internal Medicine, incorporated February 28, 1936, completed its organization on June 15, 1936. The officers chosen were Walter L. Bierring, M.D., Des Moines, Chairman; Jonathon C. Meakins, M.D., Montreal, Vice-Chairman; and O. H. Perry Pepper, M.D., Philadelphia, Secretary-Treasurer. These officers with the following six members constitute the present membership of the Board: David P. Barr, M.D., St. Louis; Reginald Fitz, M.D., Boston; Ernest E. Irons, M.D., Chicago; William S. Middleton, M.D., Madison; John H. Musser, M.D., New Orleans; and G. Gill Richards, M.D., Salt Lake City.

The purpose of the Board will be the certification of specialists in the field of internal medicine and the establishment of qualifications with the required examination procedure for such certification.

The first written examination will be held in December, 1936, and candidates successful in this written test will be eligible for the first practical or clinical examination which will be conducted by members of the Board near the time for the annual session of the American College of Physicians at St. Louis in April, 1937. The second practical examination will be held at Philadelphia near the time of the annual session of the American Medical Association in Atlantic City June, 1937.

The fee for examination is forty dollars which must accompany the application and an additional fee of ten dollars is required when the certificate is issued.

Application blanks and further information can be obtained by addressing the office of the Chairman, Walter L. Bierring, M.D., 406 South Sixth Avenue, Des Moines, Iowa, U.S.A.

Southern Oklahoma group desires young general practitioner for association, leading to partnership.

Write Key B, The Journal

P.O. Box 9696

Oklahoma City, Oklahoma

PHYSICIAN PLACEMENT

Anesthesiology

Richard S. Dillman, M.D., 529 Fifth Street, Ann Arbor, Michigan; age 35; married; University of Michigan, 1956; board eligible.

Dermatology

Ralph Joseph Coskey, M.D., 24631 Gardner, Oak Park, Michigan; age 32; Wayne State University; available November 1, 1961.

E.E.N.T.

James E. Harris, M.D., 511 Park Street, Birmingham 13, Alabama; age 33; Tulane Medical School; board eligible; available November 1, 1961.

General Practice

William MacLean MacRae, M.D., 118 Cambridge Street, Halifax, Nova Scotia, Canada; age 30; Dalhousie University, Halifax; board eligible; available immediately.

Gordon E. Nielson, M.D., Laie Medical Center, Laie, Hawaii; age 44; University of Utah; available immediately.

Melvin Stahl, M.D., 145 Lynn Street, Peabody, Massachusetts; age 31; Boston University School of Medicine; available immediately.

Leonard W. Rozin, M.D., 2740 N.W. 21st St., Oklahoma City; age 33; married; University of Kansas, 1959; now completing general practice residency at University Hospital; desires association in Oklahoma City; available July 1, 1961.

Irving Teague Staley, M.D., 4207 Givens Avenue, Memphis 17, Tennessee; age 32; married; University of Tennessee, 1960; available July 1, 1961.

Joe Allen Stewart, M.D., Box 337, Fountain Inn, South Carolina; age 36; married; University of Oklahoma, 1949; available immediately.

Industrial

A. G. Dandenault, M.D., 735 Lundvall, Rockford, Illinois; age 60; single; University of Manitoba Medical College, 1926; prefers general practice with some surgery; available immediately.

Frederic O. Epp, M.D., 110 West 6th, Augusta, Kansas; age 54; married; University of Kansas, 1938; desires industrial or governmental work; available immediately.

Internal Medicine

Spencer E. Berry, M.D., 13630 Flynn, Le Puente, California; single; University of Oklahoma, 1950; board eligible; available now.

James Stanford Haimsohn, M.D., 3340 Poplar Avenue, Memphis, Tennessee; age 43; married; University of Tennessee, 1942; board certified: available 90 days.

Donald Sinton Hall, M.D., 8283 Marlow, Detroit 28, Michigan; age 33; married; University of Cincinnati, 1955; available August, 1961.

Allen Bert Malnak, M.D., 1015½ Brown Street, Evanston, Illinois; age 32; married; University of Illinois, 1954; board eligible; available June or July, 1961.

Locum Tenens

University of Oklahoma graduate desires locum tenens during the months of August or September, 1961. Contact R. A. Yeakley, M.D., c/o St. John's Hospital, 1923 South Utica Avenue, Tulsa, Oklahoma.

University of Oklahoma graduate desires locum tenens, from mid-September, 1961 to mid-June, 1962. Contact Key A, The Journal Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City.

John B. Tipton, M.D., 326 North Ingalls, Ann Arbor, Michigan; second year of general surgery resident in Ann Arbor, Michigan; desires 3 to 4 weeks of locum tenens in Northeastern Oklahoma. Highest recommendation available.

Obstetrics and Gynecology

Robert Russell Fahringer, M.D., 1506 13th Street, Bedford, Indiana; age 38; married; Jefferson Medical College, 1953; board eligible; available immediately.

Robert Cecil Koehn, Jr., M.D., 125 A Jupiter Street, Wichita Falls, Texas; age 33; Medical School, University of Tennessee; Board certified; available September, 1961.

Michael Lado, M.D., 999 Monroe Ave, Apt. 707, Memphis, Tennessee; age 31, married; University of Pittsburgh, 1955; available July, 1961.

J. J. McElwain, M.D., 2850 6th Avenue, San Diego, California; age 36; Marquette University School of Medicine; board eligible; available immediately.

Peter Pleotis, M.D., U.S. Naval Hospital, Newport, Rhode Island; age 30; University of Illinois; board eligible; available July, 1962.

John J. Zadworny, M.D., 419 South Waccamaw Street, Columbia, South Carolina; age 30; married; University of Manitoba, 1955; board eligible; available immediately.

Ophthalmology

Charles C. Hedges, Jr., M.D., 4119 154th Avenue, S.E., Bellevue, Washington; age 36; University of California; board certified: available immediately.

Orthopedics

J. S. Ashworth, M.D., 501 Oxford Place, Louisville, Kentucky; age 35; University of Louisville; available immediately.

George Walter Shaw, M.D., 6135 Walmer, Mission, Kansas; age 32; University of Texas, Southwestern Medical School, 1953; available, December, 1961.

Emmet J. Thorpe, M.D., 6811 Stockton Drive, Knoxville, Tennessee; age 32; married; George Washington University School of Medicine, 1951; board certified; available immediately.

Perry Merrill White, Jr., M.D., 3338 Tanglewood Drive, Augusta, Georgia; age 35; married; Baylor University College of Medicine, 1953; board eligible; available

Pediatrics

William B. Bradley, M.D., Quarters 15142, Fort Lewis, Washington; age 30; University of Cincinnati; will be board certified by January, 1962; available January, 1962.

Psychiatry

William L. Sherman, Jr., M.D., 201 East Kirby, Detroit 2, Michigan; age 38; single; Wayne State University College of Medicine, 1947; board eligible; available immediately.

Murphy Mayo Sims, M.D., 3932 Ruskin Street, Houston, Texas; age 55; Louisiana State, 1936; board eligible; available immediately.

Preventive Medicine

Robert E. Jewett, M.D., 2820 Fairway Drive, Birmingham, Alabama; age 52; widower; Indiana University, 1934; board certified; desires administrative practice; available immediately.

Public Health

Elmer W. Whitcomb, M.D., P.O. Box 16, Worawora, Ghana, West Africa; age 62; University of Minnesota; desires type of medical service practice; available April, 1962.

Radiology

Quentin T. Brooks, M.D., 6922 Edgemoor Drive, Houston, Texas; age 40; married; Oklahoma University School of Medicine, 1953; board certified; available immediately.

Edward M. Sipple, M.D., 5935 Chinquapin Parkway, Baltimore 12, Maryland; age 40; married; University of Maryland, 1951; board eligible: available July 1, 1961.

William John Super, M.D., 55 Poplar Court #4, Buffalo, New York; age 38; Saint Louis University Medical School; board eligible; available immediately.

Surgery

David S. Bachman, M.D., 301 North 2nd St., Allentown, Pennsylvania; age 38; married; University of Buffalo, 1947; board certified general surgery; specilaty, broncho-esophagology and thoracic surgery; available immediately.

John Stanley Elliott, M.D., 14 Caton Drive, East Syracuse, New York; age 31; Southwestern Medical School, Dallas, Texas; available July, 1962.

Charles Richard Fielder, M.D., 158 Bay State Road, Boston, Massachusetts; age 35; single; University of Arkansas, 1954; board certified; available August, 1961.

Donald William McMillan, M.D., 5021 Old Colony Road, Kalamazoo, Michigan; age 37; University of Michigan; board certified; available immediately.

Urology

Joseph N. Ward, M.D., 480 Emory Circle, Atlanta 7, Georgia; age 35; married; University College, Dublin, Ireland, 1949; board eligible; available immediately.

MISCELLANEOUS ADVERTISEMENTS

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Coming Meetings

STATE

Oct. 23-25—Oklahoma City Clinical. Sheraton-Biltmore Hotel, Oklahoma City.

REGIONAL

Oct. 1-4—Colorado State Medical Society. Shirley Savoy Hotel, Denver, Colorado.

Oct. 17-21—Western Orthopaedic Association. Statler-Hilton Hotel, Dallas, Texas.

Oct. 20-21—Clinical Conference on Cancer. University of Texas M.D. Anderson Hospital and Tumor Institute, Houston, Texas.

Oct. 26-28—Clinical Orthopaedic Society. Hotel Sheraton, Dallas, Texas.

Nov. 6-9—Southern Medical Association. Adolphus Hotel. Dallas, Texas.

Nov. 25-27—American College of Chest Physicians, Interim Session. Brown-Palace Hotel. Denver, Colo.

NATIONAL

Aug. 27-Sept. 1—American Congress of Physical Medicine and Rehabilitation. Sheraton-Cleveland Hotel, Cleveland, Ohio.

Sept. 28-30—American Association for the Surgery of Trauma. Drake Hotel, Chicago, Ill.

Sept. 30-Oct. 8—American Society of Clinical Pathologists. Olympic Hotel, Seattle, Wash.

Oct. 2-5—American Academy of Pediatrics. Palmer House, Chicago, Ill.

Oct. 2-6—American College of Surgeons. Conrad Hilton Hotel, Chicago, Ill.

Oct. 2-6—Postgraduate Assembly in Endocrinology and Metabolism. Bethesda, Maryland.

Oct. 23-24—American Cancer Society. Biltmore Hotel, New York City.

Nov. 3-4—Central Society for Clinical Research. Drake Hotel, Chicago, Illinois.

Nov. 4-5—County Medical Society Conference on Disaster Medical Care. Palmer House, Chicago, Illinois.

Nov. 6-9—Southern Medical Association. Adolphus Hotel, Dallas, Texas.

Nov. 6-9—Section on Ophthalmology and Otolaryngology of Southern Medical Association. Dallas, Texas.

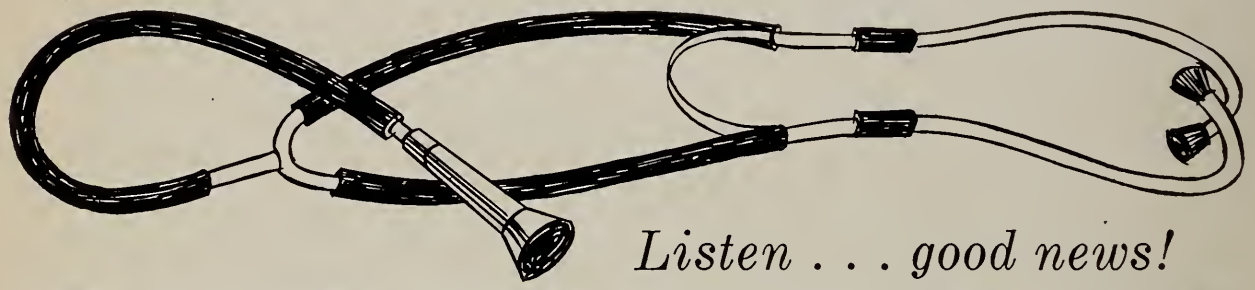
Nov. 25-27—American College of Chest Physicians. Brown-Palace Hotel, Denver, Colo.

Nov. 6-9—Southern Medical Association. Adolphus Hotel, Dallas, Tex.

Nov. 27-30—American Medical Association, Clinical Meeting. Denver, Colo.

1962

Jan. 27-Feb. 1—American Academy of Orthopaedic Surgeons. Palmer House, Chicago, Illinois.



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The JOURNAL of the Oklahoma State Medical Association

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Cover Art: William Mark Cason

in abdominal distention

Associated with air swallowing, functional indigestion, spastic colitis, diverticulitis, peptic ulcer, postoperative gas.

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The original brand of methylpolysiloxane



a gastrointestinal DEFROTHICANT*

Air swallowing, abnormal peristalsis or "nervous indigestion" accelerates foaming. Foam and froth increase the volume of gastrointestinal contents causing discomfort.

SILAIN *dispels foam and froth*

Even normal peristalsis may produce thick, viscous foam in the presence of gastric mucin and gas forming digestive processes.

SILAIN *reduces increased volume*

By lowering interface cohesion, SILAIN breaks down the gas bubbles reducing the foam to a liquid.

SILAIN *provides fast relief*

Relief occurs promptly when foam is broken—entrapped gas is liberated for normal absorption or eliminated by belching or passing flatus—volume decreases immediately.

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A single non-toxic compound, SILAIN acts physically with no effect on gastrointestinal motility.

FORMULA: Each tablet contains 50 mg. methylpolysiloxane.

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*DEFROTHICANT—The property of preventing and eliminating foam.

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The New Inserts and Why

SINCE THE EDITORIAL which appeared in the September issue was written, the *Journal* has offered Blue Cross and Blue Shield and the State Department of Public Health an opportunity to alternately tell their stories through inserts to more effectively catch the eye and the interest of the reader. The first of these inserts appears in this issue. The need for explaining the reason requires some repetition which I hope will be understood and forgiven.

We are in a no-holds-barred struggle to prevent socialization of medicine. Emotional words are flung back and forth by both sides —silly business it is. Let us examine the situation today and take a careful look at the reasons for the *Journal's* interest in both of these entities.

THE COST OF COMMUNITY HEALTH

Prior to 1798 the cost of Community Health was nothing. It was not available and therefore could not be purchased at any price. The whole world lived in terror of smallpox, of plague, of cholera, of typhus and a host of other diseases in whose power we were. During the 18th century, 60 million people died of smallpox alone. While the deaths were recorded, the number left blind, crippled and deformed was not. A tiny inkling of what things were like is available to us if we but remember a few years back how terror struck our hearts when polio, like Hurricane Carla, hit the gulf coast and spread rapidly up through Texas into Oklahoma. In 1798 Edward Jenner gave the world a technique for preventing smallpox and preventive medicine took life. The sequence over one and a fourth centuries—matter from an active cowpox vaccination into the arms of the susceptible, costly, cumbersome and carrying the danger of inoculation of other diseases—to calf lymph in a capillary tube for a few cents, always available and entirely safe. This is our system at work.

Nothing much happened then until Lister recognized the significance of Pasteur's paper on fermentation sixty odd years later. With the work of Pasteur and Lister, antiseptic surgery came into being — again through prevention. By the early part of the present century we knew that mosquitos were the carriers of malaria and yellow fever and their breeding places were rapidly being destroyed or rendered harmless; we knew that typhoid, cholera and dysentery could be transmitted by contaminated water, milk and food and these necessities of life were being made safe by preventive medicine. Shortly we knew how to prevent typhoid, diphtheria, tetanus, whooping cough and now polio by techniques for active immunization—all preventive medicine. The community can obtain health—is is available. There remains much to be done in the field of preventive medicine—accidents, industrial hazards, the prevention of mental illness. Compare the cost of community health to the cost of sickness before this health became available.

THE COST OF MEDICAL CARE

This was very little in the 18th century—there just wasn't much of it—fomentations, blood letting, leeching, purges, emetics and the like. Surgery was dangerous but amputations and drainage of abscesses were necessary—part time jobs for barbers. Anesthetics were introduced in the 1840's. These made surgical procedures less painful but because of infection hardly less dangerous. The potential of the art and the skill of the surgeon could not be explored until Lister came up with the concept of antiseptic surgery for the prevention of infection. The cost of care began to go up because we now began to have medical care. Aseptic surgery followed but the surgeons were not really free to realize their potential in spite of improved anesthetics and anesthetic techniques until satisfactory means of treating infections appeared in 1936 with the sulfa drugs, followed shortly by penicillin, streptomycin, the broad spectrum antibiotics and chemotherapeutic agents for treating acid

fast infections. Today there is available a great deal of care and the cost is high. Radium and x-ray were not discovered until the 1890's. Only recently have x-rays become an indispensible diagnostic tool. Their use requires highly trained and skilled physicians, especially trained technicians and expensive equipment. The diagnostic tools that are available now and in the process of being developed are almost unbelievable. They require highly trained people for operation and interpretation. The surgeons are able to cure conditions always considered hopeless. The cost of care is going up and it will continue to do so. New and more and more costly equipment is being required along with personnel trained in its use. The nurse is at last emerging from the trainee supplying service at almost no cost and ending up as the hand maiden of the physician on bare existence pay, to the well educated, well trained young woman commanding a salary commensurate with the skill and responsibility required by her job.

CONCLUSION

The community is entitled to all the health available to it, and we, as physicians interested in health must actively support every reasonable effort to obtain it. We take community health for granted, raise hell if it breaks down but give no thought to the means and the people by which it is provided, let alone actively support the Department of Public Health in its effort to secure more and more health for us. We, in Oklahoma, even went so far as to use the boon of a technique for the community to prevent polio as a means of forcing people into the doctor's office. How stupid can supposedly intelligent people be? We must accept this right of the community and foster it in any way that we can. The *Journal* hopes that the inserts from the Department of Public Health will get over to the physicians the possibilities for community health and the means by which they can become realities.

The practicing medical profession's job is to provide care, being of course always mindful of opportunities to secure health for the patient. The cost of this care that we must and want to provide is going up because there is a great deal more of it now than formerly. There is no reason to apologize, people get much for their money. A change in technique of providing care from the present way to the socialistic way isn't going to make it any cheaper and is pretty apt to make it cost a great deal more, if to the cost is added a livelihood for a hell of a bunch of bureaucrats and political hangers on, as well as a new corps of secretaries and typists to fill out the forms.

The people, however, regardless of cost are going to have care. Since its cost is high and will go higher still, more and more people are finding it difficult to come by. Since the people are going to have it, this state of affairs could well lead to socialization in spite of our arguments to the contrary.

Fortunately for us and for people at the time that the cost of care began to go up rapidly, a technique for budgeting for costs by pooling funds under Blue Cross developed. This was of course for hospital care but was followed shortly by Blue Shield for physicians care. If Blue Cross and Blue Shield collapse, our defense against socialization collapses also. Even though we, the physicians and most people are opposed to socialized medicine, we and they are inclined to consider Blue Cross and Blue Shield as Uncle in the same way we would consider Uncle Sam as Uncle—let Uncle pay for it. As the cost of care goes up the cost of Blue Cross and Blue Shield is going up. Fortunately for people Blue Cross provides care, not dollars, and in this way for small increases in monthly payments from time to time, they are protected against rising costs. It is regrettable that Blue Shield does not also provide service rather than dollars. This is the weakest link in our defense against socialization even though it insures greater security for Blue Shield than Blue Cross enjoys because of its effort to meet rising costs.

If we are to survive, Blue Cross must do its job and stay solvent. With the inserts provided in the *Journal,* the profession knowing why, should learn how to help Blue Cross and Blue Shield solve their problems, and accept the responsibility that must be required of those who direct the utilization of the dollar set aside for health care by the guy who wants to pay his own way.—*E.H.N.*

Enforcement of the Medical Practice Act



The State Board of Medical Examiners is doing a very fine job in the matter of providing facilities for the issuing of licenses in the State of Oklahoma by examination and reciprocity. The usual mechanism seems adequate in this respect.

However, there is one area of extreme difficulty and frustration. This has to do with the fact that every now and then a person moves into Oklahoma and represents that he or she is licensed to practice medicine when such is not the case. It is literally impossible for the members of the Board to maintain a constant surveillance over all the state of Oklahoma. It is therefore suggested that each member of the State Medical Association should give due recognition to this situation and assist in the enforcement of the Medical Practice Acts. The method proposed is relatively simple.

1. There should be at least one doctor in each county or district in Oklahoma who would take a personal interest in determining the qualification of any new doctor.
2. He should refer to the offices of the State Board of Medical Examiners (580 Home State Life Building, Oklahoma City 3) to determine whether or not the doctor is actually licensed in any category of the Healing Arts.
3. If he is licensed as a medical doctor he should be interviewed and made welcome and invited to apply for membership in the county or district society.
4. If he is licensed in some other category of the Healing Arts he should not be molested.
5. If he has no license of any sort then the county attorney should be so informed with the request that some action should be taken.

The matter of timing is of utmost importance and if the person is unworthy to be called doctor he should not be permitted to remain in the community long enough to establish extensive acquaintance and friendship. Each day this continues produces increasing difficulty in arranging any sort of disciplinary procedure.

Your interest is cordially solicited.

Clinton Gallaher M. D.
President

OSMA JOURNAL/scientific

Craniofacial Dysostosis Crouzon's Type

JOE N. MASON, M.D.

A review of the literature and presentation of an additional case of Crouzon's disease, in which the disease encompasses five generations.

MALFORMATIONS of the skull and face associated with ocular symptoms have been reported since 1866.[1] In 1912, Crouzon presented a paper describing two patients—a mother and her son. He gave the name "Hereditary Craniofacial Dysostosis" to the syndrome exhibited by these two, and characterized by a cranial malformation that is a combination of a skull in the shape of a boat and in the shape of a wedge; malformation of the face resulting in an arched nose resembling a parrot's beak; marked protrusion of the mandible beyond the maxilla; bilateral exophthalmous and external strabismus; and a hereditary and familial occurrence of these malformations.[2]

This malady is rare. There appears to be no sex linkage because these malformations are seen in both sexes with approximately equal frequency. There is evidence that with progressive generations the disease assumes a more severe form.[3]

The exact cause of Crouzon's Disease is not known. Many theories have been advanced over the years. At different times, tuberculosis, syphilis, rickets, endocrine disorders, cranial osteitis, and systemic and metabolic disorders have all been incriminated. Now there is agreement that this disease is not due to any of the above. Lokey noted in six cases of children with Crouzon's Disease that they seemed improved both physically and mentally while on daily therapy with thyroid.[4] Serum cholesterols were within normal limits in all these. Wickes presented a case of an abnormally developed infant delivered of a mother who had received insulin shock therapy during the second month of gestation. On reviewing the literature of children delivered from mothers who had received similar therapy he found one additional case of an abnormally developed infant, and many macerated stillborn infants. His conclusion was that shock therapy prior to ten weeks gestational age was likely to cause abnormal development of the fetus.[5]

Russell presented five cases of craniofacial dysostosis with associated anomalies, which had evidence pointing to an intrauterine cause for the malformation. Three of the five had been complicated by threatened abortion during the first trimester of pregnancy. These three with one additional case all had "very small" infarcted placentae.[6] Bleeding during the sixth and seventh months of pregnancy was reported in the prenatal history of the mother of the case herein reported.[7]

The original description by Crouzon included a hereditary and familial occurrence of this disease. Dodge, however, states that an hereditary or familial element is not present in all cases of Crouzon's Disease.[2] One-fourth of reported cases occur without a family history so these are called "sporadic craniofacial dysostosis."[2] Other authors concur with this.[8]

The majority of authors believe that Crouzon's disease is hereditary. Schiller presented a case with 12 siblings, five of whom had the disease.[2] Pinkerton and Pinkerton present four cases occurring in one family and they believe it is an hereditary disorder,[10] as does Krause, et al.[1] Lake, et al.,[9] as well as Flippen[7] conclude that it is an hereditary manifestation, being a dominant trait. Most of the reported cases are in the European literature, and Krause states that most patients described are of French stock. Others believe there is no racial or sexual predilection.[11]

The craniofacial distortion is the result of premature closure of suture line. Normally these membranous bones do not fuse until the third or fourth decade, however the margins are interlocked by six to 12 months.[10] It has been theorized that the reason for premature closure of the sutures is a defect primarily of the interstitial mesenchyme which normally separates the skull bones in their suture lines.[7, 11] It has also been classified as a defect of the mesodermal anlage of the bones of the base and sides of the skull.[1, 11]

Many associated anomalies have been reported. In Crouzon's original case, the child also suffered from epilepsy and urinary incontinence. Two of Dodge's patients had associated syndactylism, as have others.[11] Lokey reported two cases with associated congenital heart anomalies.[4] Complete nasal obstruction with bilateral complete choanal atresia has been reported.[12]

The most commonly associated findings



Figure 1. T.M., age 6 days.

are related to the central nervous system, including the eyes. Pinkerton, et al., believe that the severity of the signs and symptoms depend on the time of synostosis of the sutures. With the sutures closing earlier, the symptoms and findings are more marked.[10] These patients may or may not be mentally defective. Russell presented five patients with normal intelligence.[6] Lokey, on the other hand, reported six patients with severe mental retardation, recording I.Q.s ranging from 36-56. Schiller had three children with grossly normal intelligence and two with mental deficiency.[3] It is logical to assume that with early closing of the sutures and the resulting increased intracranial pressure, there will be some loss of brain substance.

With the orbital changes, exposure keratitis is very common. Also, due either to orbital bony changes or increased intracranial pressure, blindness with optic atrophy is a common sequel. Most authors believe that the optic atrophy is secondary to papilledema, however it may be due to mechanical stretching of the optic nerve.[1, 9]

Surgical prevention of increased intracranial pressure is the treatment of this malady. Early surgical intervention seems logical to decrease the central nervous system hypertension, and it is thought that the inevitable complications of this condition are usually preventable.[9, 11] Operation is recommended as early as six months of age.

Pneumoencephalography is indicated in all patients with Crouzon's Disease for a better interpretation of the seriousness of their

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disability. Contraindications to operation include extremely large ventricles, porencephaly, marked brain abnormalities, severe mental retardation or complete blindness.[2] Indications for craniotomy are: 1. Progressive exophthalmos, progressive optic atrophy or evident diminishing visual acuity. 2. Progressive mental deficiency. 3. Simple increased intracranial pressure with or without any of the above symptoms. 4. Cranial deformity and x-ray evidence of digital impressions in the skull with no clinical evidence of increased intracranial pressure.[2, 10] For the specific ophthalmologic problems of external strabismus and exposure keratitis, corrective muscle operations and lateral blepharoplasty are recommended.

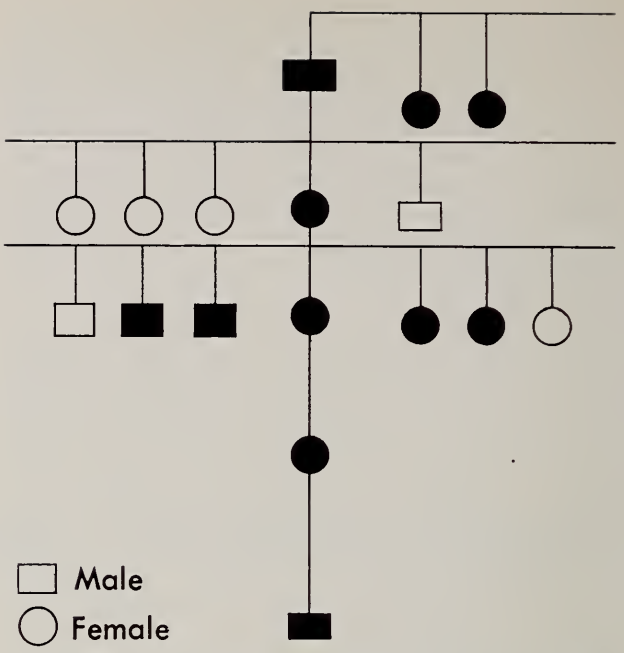


Figure 2. Family Tree. Square symbols represent male members, female members are represented by circles. Solid symbols represent those affected with this disorder. The open symbols represent non-affected members. The five generations that were known to have this disorder are represented.

CASE REPORT

T.M., white male, was delivered May 8, 1960 by caesarean section because of cephalopelvic disproportion. The prenatal course was uneventful. One month prior to delivery, roentgenograms of the mother's abdomen revealed a definitely abnormal fetal skull with the possibility of encephalocele. Physical examination at the time of birth revealed severe malformation of the fetal head. The remainder of the body appeared to be completely normal. There were spontaneous respirations. The birth weight was eight pounds, three ounces.

Examination of the head showed a striking bilateral exophthalmos, which required suture closure of the right eyelids. The skull was a combination of scaphocephaly and trigonocephaly with characteristic anterioposterior flattening and increase in transverse diameter. The superior portion came to a point which was extremely hard. There was noted an outpouching bilaterally posterior to the zygomatic arches over which no bone was palpable. There seemed to be a greater than normal distance between the eyes with the upper portion of the nose flattened and broad. No bone was noted around the lateral borders of the orbits. The remainder of the nose was "beak-like." Already prognathism was evident with a large mandible and small maxilla. The tongue seemed larger than usual. The patient could appreciate light in both eyes shortly after birth. The remainder of the physical examination was that of what appeared to be a healthy male infant. (See figures.)

The neonatal course was uneventful except for ocular difficulties. Occasionally the right eyelid would close behind the eyeball. The patient was dismissed with its mother on May 15, 1960. This patient was followed in the out-patient department, being first seen there on May 27, 1960, at which time he was apparently doing well except for beginning development of exposure keratitis. He was seen again June 9, 1960, when it was noted the bilateral exposure keratitis was more severe. At this time it was doubted if the infant had vision in either eye. The patient was readmitted to the hospital on June 15, 1960, with diarrhea and dehydration, associated with salicylate intoxication. Despite all medical efforts the child expired two days later on June 17, 1960. A post-mortem examination was done and the final diagnoses were:

1. Crouzon's Disease—craniofacial dysostosis
2. Bilateral temporal encephalocele
3. Marked internal hydrocephalus
4. Bilateral panophthalmitis

5. Acute tracheobronchitis and bilateral bronchopneumonia

COMMENT

The evidence, though not conclusive, favors an hereditary or familial nature in Crouzon's disease. The aforementioned case certainly concurs with this. The pedigree of this infant was presented by Flippen in 1949.[7] In his excellent article he described four generations in this family afflicted with the disease. I have found no article with more than four generations present. With this report, a family of five generations is presented, in which the same physical findings were noted. The mother of this infant seems to have grossly normal intelligence, as does the grandmother and great-grandmother, all three of whom I have interviewed personally. In this family there is a marked increase in abnormal physical findings with succeeding generations. Members of the last generation are by far the most severely involved physically. No intellectual assays were attempted on this child but with the profound physical changes in his calvarium some degree of mental deficiency was surely present. In this family it certainly appears to be a dominant trait.

The complete history of the remainder of this family is not known, but many of the offspring from this grandmother's siblings have this disease. This fact strongly supports the hereditary aspects of the disease. This family also supports the contention that progressive generations are more severely involved.

SUMMARY

1. On review of the literature, Crouzon's Disease is apparently an hereditary disorder, with no sexual predilection.

2. The treatment of this disorder is surgical prevention of increased intracranial pressure, by which means it is thought the mental deficiency and blindness associated with the disease can be prevented.

3. An additional case report is presented, in which the disease involves five generations. □

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No Pay For Polio Care

The National Foundation changed its policy in 1959 by discontinuing payment for professional services rendered to patients with acute or residual paralytic poliomyelitis. Since many local NF chapters had previously been paying for such service, the change in policy has caused some confusion.

Patient aid policies of the foundation are now based on the concept that the economic burden of such catastrophic illness may best be alleviated by assisting with ancillary costs of lengthy hospitalization and by offering aid to economically distressed families of such patients. Moreover, the National Foundation believes its withdrawal from providing professional care will eliminate any misunderstanding about the traditional patient-physician relationship.

Use of Radioactive Isotopes in a General Hospital

THOMAS R. COX, M.D.

The use of radioactive isotopes enables the general hospital to assay metabolic processes otherwise difficult or impossible to explore, and to evaluate the normality of many of the body's organs and functions.

THE ADVENT of readily available, pharmaceutically prepared radioactive tracer elements has brought the use of radioisotopes and isotope labeled compounds within the scope of any general hospital, regardless of size. The first and most important requirement for their use is a physician who is interested in the use of radioactive material and will take the training required to obtain an AEC license and give the time required to run a properly regulated isotope laboratory.

The second requirement is a relatively modest outlay to the hospital for a scintillation tube for external counting of patients and standards, a well counter for use on blood, plasma and other liquid samples, and a scaler for recording the number of impulses from the sample. A preferable, but considerably more expensive item, can be a gamma ray spectrometer which lowers background to minimal limits by focusing on the actual energy spectrum of the emissions of the radioactive material.

THYROID FUNCTION AND THERAPY

One of the most valuable and frequent uses of the isotope is in the evaluation of thyroid function. The isotope tests, together with the chemical protein-bound iodine, have almost completely replaced the BMR and cholesterol as measures of thyroid function in most institutions. The following tests are those which are commonly utilized for thyroid function.

(1) *I^{131} uptake.* Sodium I^{131} is given as a capsule, or liquid, by mouth. External throat counts are done on the patient from three to six hours after administration and at 24 hours. The percentage uptake of the thyroid gland can then be calculated by direct comparison with a standard. Normally, the thyroid should take up between ten per cent and 45 per cent of the administered dose within the 24 hour period. The uptake of the thyroid gland is interfered with by any of the thyroid depressant drugs such as propylthiouracil, Tapazol, and related compounds; by exogenous sources of iodine such as Lugol's solution, iodide containing cough medicines, or long lasting radio-opaque iodine containing dyes such as those used for gall bladder and renal studies. There are other drugs, ordinarily not considered by the clinician, which interfere with the uptake. These include sulfa drugs, hormone

preparations (including both thyroid hormones and sex hormones), some of the tranquilizer groups, and certain vitamin preparations. The length of time which must elapse after administration of these drugs before an I^{131} uptake can be considered reliable varies with the individual medication.

(2) *Protein-bound iodine conversion.* Concurrently with the radio-active uptake it is advisable to run a protein-bound iodine conversion test. By measuring the total activity of I^{131} in the serum at 24 hours and then removing the inorganic iodides by filtration through a special resin and again counting the serum, one can get a percentage of the circulating iodine that has been converted to organic iodide. This is a very valuable test and will often make the diagnosis of thyroid disease possible, even where some interfering medication has partially blocked the thyroid gland. With the PBI conversion and uptake together, a diagnostic accuracy of close to 100 per cent can be achieved. It was formerly thought that the PBI conversion was not much help in hypothyroidism but with the use of improved resin, hypothyroidism can be accurately diagnosed. The normal conversion is 13 to 43 per cent.

(3) *PBI* I^{131} *plasma levels.* In a patient who has circulatory or renal incompetence so that the excretion of inorganic sodium iodide does not go on at a normal rate, one might find the PBI conversion falling into hypothyroid range due to excessive amounts of circulating radioactive sodium iodides. In order to eliminate this source of error, a 48 or 96 hour specimen may be taken. At this time all inorganic iodides will have been completely excreted and the calculation of the circulating I^{131} divided by the administered dose per liter of plasma gives a percentage figure which reflects a high degree of diagnostic accuracy. The normal range is 0.26 - 0.27 per cent.

(4) *Scanning of the thyroid.* Although most smaller hospitals would probably not wish to purchase a scanner, a scan of the thyroid after administration of the diagnostic dose can give information on the amount of activity present in any nodules palpated in the thyroid. This, of course, is helpful in differentiating toxic nodules and cold nodules which might represent carcinoma.

(5) T^3 *uptake.* Recently a new in vitro test has been designed for measuring thyroid function using radioactive labeled Tri-iodothyronine. In the presence of increased circulating protein-bound thyroid hormones, red cells will absorb greater quantities of the radioactive labeled T^3 so that by measuring the activity of a specific sample to which radioactive T^3 has been added, then washing the cells and measuring the radioactivity remaining on the red cells, we are able to give a reliable report of thyroid function. The main values of this test lie in the fact that it is not interfered with by circulating inorganic or organic iodides, and the serum may be sent in from a distance to the isotope laboratory without the patient having to make the trip. It is also of value in children, adolescents, and in pregnancy where one may not wish to administer radioactive material.

(6) *Therapy.* The therapeutic use of I^{131} in the treatment of hyperthyroidism, angina pectoris, and intractable heart disease has become more and more frequent in recent times. For the hyperthyroid patient, it offers a monetary saving, greater rapidity of results than other type medication, and where this treatment has been adequate, there is no recurrence. The recurrence of toxic goiter after surgical removal is in the neighborhood of 25 per cent. The only drawback is in the administration of radioactive substances in children, adolescents, and pregnant women and the fact that a small percentage of patients go on to a hypothyroid state. However, the percentage of hypothyroidism in competent hands is no greater than that following surgical removal. The theoretical concept of development of thyroid cancer following the administration of ra-

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dioactive I^{131} has not, after these many years of utilization, proven valid in a single reported case, nor has the administration of equivalent doses in animals produced carcinoma of the thyroid.

HEMATOLOGIC DIAGNOSIS AND THERAPY

The radioactive materials have found a great deal of use in the field of hematologic diagnosis as well. In this field it can make or confirm diagnoses which would otherwise be obscure, and measure metabolic pathways which would otherwise be almost inaccessible.

(1) *Schilling test for pernicious anemia.* Pernicious anemia is one of the diseases which we very seldom see in its pure form due to the widespread use of multiple vitamin compounds containing folic acid and liver and the use of multivitamin and liver injections in physicians' offices. For this reason, the diagnosis of pernicious anemia from the hematologic standpoint is often difficult. By the use of Vitamin B_{12} which is labeled with radioactive Cobalt, a diagnosis of pernicious anemia can be made in spite of any previous medication. Instead of several months being required for the previous medication to lose effect, this test can be performed within 48 hours of the last medication. The technique of the test is the administration of a capsule of radioactive B_{12} labeled with .5 of a microcurie of radioactive Cobalt. (This may be $Cobalt^{57, 58 \text{ or } 60}$. The trend is to the use of $Cobalt^{57}$ because it gives a better count on a gamma ray spectrometer and administers less of a radioactive dose to the liver.) One hour following the administration of the radioactive Cobalt on an empty stomach, the patient is given 1000 micrograms of Vitamin B_{12} as a flushing dose. The urine is collected for 24 hours and the percentage of excretion of Vitamin B_{12} is measured. If ten per cent or more of the radioactive B_{12} is excreted, the patient is able to absorb B_{12} normally and does not have pernicious anemia. If less than four per cent is excreted the patient has pernicious anemia or a malabsorption syndrome. By repeating the test, with the administration of intrinsic factor and B_{12}, we can differentiate a true Addisonian pernicious anemia from a malabsorptive syndrome. In the true pernicious anemia, the B_{12} excretion will triple or quadruple and fall in normal limits. Those patients who fall in the borderline range between four and nine per cent on the initial test usually do not have pernicious anemia, but should be repeated with intrinsic factor to verify the diagnosis.

(2) *Red cell survival studies.* In the diagnosis of hemolytic anemias and other diseases where there is a shortened red cell survival time, the administration into the circulation of red cells labeled with $Chromium^{51}$ enables us to tell how long a time the patient's red cells are surviving. The technique usually is to take the patient's own red cells, or Type O cells from a donor, label these with $Chromium^{51}$, and inject them into the patient's circulation. Twenty-four hours later a blood sample is taken to use as a standard, and then multiple specimens are taken at intervals of days to a week thereafter until there has been a disappearance of 50 per cent of the radioactivity from the peripheral blood. The half time of survival of normal cells is 22 to 26 days. By external counting over the spleen and measuring the amount of $Chromium^{51}$ present in this area, it can be determined whether the red cells are being destroyed there and a diagnosis of hypersplenism can be confirmed.

(3) *Radioactive $Iron^{59}$ studies.* By the use of radioactive iron employed as a chloride or citrate, we can determine several things of value. First, after injection of a specific amount of $Iron^{59}$, we can measure its clearance rate from the plasma. This is accelerated in polycythemia, leukemias, anemia and iron deficiency anemias and increased in aplastic bone marrow conditions. Second, we can determine the ability of the gastrointestinal tract to absorb iron by giving the dosage orally and measuring its appearance in the blood. Third, we can measure the incorporation of the radioactive iron into the red blood cells and in this manner measure the ability of the patient to form hemoglobin. About 85 per cent of the intravenously administered dose should be incorporated in hemoglobin in ten days, and if it is below this percentage, it would indicate a defective utilization of iron in the

formation of hemoglobin.

(4) *Therapy.* Radioactive Phosphorus^{32} can be very useful in the treatment of polycythemias and some chronic leukemias, but there is no sensitivity to Phosphorus^{32} where sensitivity to x-ray is not also present. For this reason, it is saved primarily for use in polycythemias.

MISCELLANEOUS

(1) *Studies of blood volume.* Studies of blood volume, which are of great interest to the surgeons during major procedures and on occasion to the internists, have always been notoriously unreliable with the older techniques. With the use of radioactive I^{131} labeled albumin or Chromium^{51} labeled red cells, a fast, accurate blood volume can be determined.

(a) *Radioactive labeled albumin blood volumes.* Ten to 20 microcuries of radioactive iodine labeled albumin is injected into the circulating blood and after ten to 20 minutes, a sample of blood is taken from the other arm. By counting the radioactivity in this sample as compared to a standard, we are able to determine within ten per cent, or less, error, the total circulating blood volume. By separating the plasma and counting this, the plasma volume can be determined. By subtracting the plasma volume from the total blood volume, the red cell volume can be determined and by simple division, the hematocrit is calculated. This test can be repeated as often as is necessary before, during, and after operation. It is also of use in determining the blood volume in questions of polycythemia vera or other disease such as stress syndromes which would alter blood volume.

(b) *Chromium^{51} blood volume.* A measured quantity of washed red cells labeled with Chromium^{51} is injected intravenously and after ten to 20 minutes a sample of blood is taken from the other arm. By counting this sample as compared to a standard, the total blood volume can be calculated. This procedure has been greatly simplified by the introduction of a small plastic coil, which fits into a well counter and in which both the standard and the patient's blood can be counted. By the use of Risa and Chromium^{51} labeled cells, a plasma volume and red cell mass may be measured simultaneously.

(2) *Gastrointestinal bleeding.* The diagnosis of gastrointestinal bleeding can be made by administration of 200 microcuries of Chromium^{51} on red cells and following the daily amount of radioactive material excreted in the stools.

(3) *Fat absorption studies.* The diagnosis of sprue and other sprue-like malabsorption syndromes, as well as pancreatic diseases such as cystic fibrosis, can readily be made by the use of radioactive lipids such as Triolein and fatty acids such as oleic acid labeled with I^{131}.

After blockage of the thyroid for several days with the administration of Lugol's solution, a measured dose of Triolein labeled with I^{131} and usually between 25 and 50 microcuries of radioactivity is administered orally to the patient in a fasting state. Blood samples are then taken at three, four, five, and six hours and the percentage of absorption of the Triolein can be calculated by reference to a standard, which is supplied with the radioactive Triolein. The peak of absorption should be from three to four hours and at this point, ten per cent of the administered dose should be in the circulating blood.

If the test is abnormal using Triolein, one must differentiate between the absence of pancreatic enzymes and the failure to absorb fatty acids. By repeating the same procedure and administering oleic acid labeled with I^{131}, the absorptive ability of the gastrointestinal tract is measured for fatty acids. If sprue, Whipples' disease or other types of malabsorptive disease is present, then absorption will be normal. If the previous abnormal result was due to absence of pancreatic lipase, such as in cystic fibrosis, the results will be normal with the fatty acid.

A second method of performing this test, but somewhat less desirable, is the collection of stool specimens for three to four days following the administration of the radioactive dose and a measure of the amount of radioactive fat excreted.

(4) *Measurement of exchangeable sodium and potassium or sodium and potassium space.* By the use of radioactive Sodium^{24} or Potassium^{42}, the total exchangeable sodium

of the body, as well as the sodium or potassium space can be determined. The procedure for this is primarily the injection of the radioactive elements and measurement of the amounts of material excreted in the urine. These are of great advantage in handling selected electrolyte problems.

Almost daily we are finding more and more ways of studying human metabolism by use of radioactive labeled compounds. The study of *renal functions* is one of the newer tests coming into popularity. *Hepatic function* studies have been utilized for several years. A tracer dose of radioactive material can help in *tumor localization*, or in the differentiation of aneurysms from tumor masses. Radioactive assays of circulation time and cardiac output are among the newer tests. Radioactive tracer doses in diagnosis, particularly in the *diagnosis of metabolic disorders*, is becoming more and more common in hospitals of all sizes throughout the nation. The minute amounts of radioactive material used are, for the most part, rapidly excreted and do not subject the patient to any dangerous amount of radioactivity.

It is beyond the scope of this paper to go into detail on each and every one of these uses, and I have included herewith only those tests which are most commonly used in hospital practice.

In *summary*, we have a large group of tests using radioactive tracer elements which enable the physician to make faster and more accurate diagnosis at a very reasonable cost to the patient, and which enable us to explore metabolic pathways previously only studied with great difficulty. □

Hillcrest Medical Center, Tulsa Oklahoma

Diabetes Detection and Education Week

Diabetes, seventh in the list of causes of death by disease, affects 2,750,000 Americans—about one-half of whom do not know they have it! It's a national problem of increasing magnitude.

Diabetes Week, sponsored nationally by the American Diabetes Association, is not a fund-raising campaign. Its two-fold purpose is to identify those hidden diabetics and to acquaint all Americans with the symptoms of the condition.

The detection phase of the program is a primary responsibility of county medical societies, whose physician-members, regardless of specialty, are urged to test their patients during this important drive. Not only should medical groups cooperate in Diabetes Detection and Education Week, but individual physicians should make it a policy to test each patient at least once a year—one out of every 140 of them as unknown diabetics!

The American Diabetes Association is furnishing promotional, educational and testing materials directly to county chairmen. Local medical societies and the AMA have long recognized the worthwhile principle of this program—now let's take advantage of the materials offered us and put the principle to work!

HUGH JETER, M.D.
Chairman, Committee on Diabetes
Oklahoma Chapter, American Diabetes Association

Emergency Gynecologic Lesions That May Confront the General Surgeon

JOSEPH HYDE PRATT, M.D.

Emergency gynecologic lesions may be as catastrophic as any in surgery, necessitating attention to details in diagnosis and treatment to prevent overwhelming blood loss, most errors in diagnosis of these lesions being due to omitting or overlooking routine procedures.

A COMPLETE DISCUSSION of gynecologic lesions requiring emergency treatment would include most of the disorders that bring young adult women into the physician's office. In this paper I shall mention many conditions but discuss only a few of the commonest in detail. I want especially to emphasize those that the general surgeon is most likely to see. Some of the cases, of course, have a fantastic turn, such as the girl who calls a doctor on the telephone and excitedly says, "Doctor, there's something in my vagina. What should I do?" The object could be almost anything, but it turns out to be a Tampax** with a broken string. Some gynecologic emergencies, on the other hand, are as important and life-threatening as any encountered in general surgery. They require immediate attention and consideration.

A woman complaining of abdominal pain may present herself at any physician's office. She can be any age but usually is a young adult, since this is the age when the greatest variety of emergency gynecologic illnesses occur in women. The initial evaluation is most important, for some gynecologic emergencies require immediate treatment while others do not. Such papers as Carrington's[1] on diagnostic errors in 1932 patients presenting emergency gynecologic lesions and Marchetti's[2] on ectopic pregnancy have repeatedly pointed out the high percentage of wrong diagnoses. Snyder and Chaffin,[3] in a general discussion of differential diagnosis, suggested possible ways to approach the problem. Although one should make every intellectual effort to establish the specific, correct diagnosis, it is most important to recognize the need for an emergency operation when it is encountered and to be prepared to do something about it.

The errors made in preoperative diagnosis are generally not so much errors relating to knowledge or ability as to omissions or faulty judgment, such as overlooking some detail of the history or pelvic examination, or omitting the rectal or vaginal examination.

Correct management of acute abdominal disease requires a careful, complete, accurate history of the onset and course of the immediate illness. In fact, attention to detail in taking the history and performing the physical examination is the most important step one can apply to the problem. Patients with twisted cysts, ruptured ectopic pregnancies, perforated ulcers, ruptured corpora lutea, or acute appendicitis may look much alike; but symptoms of acute appendicitis generally start centrally and localize laterally, those of perforated ulcer usually start with sudden epigastric pain, and those of a twisted cyst may begin suddenly in one lower quadrant and the patient may give a history of several similar episodes. Symptoms of a ruptured ectopic pregnancy or corpus luteum start suddenly but differ in that they rapidly become catastrophic in the former and

*Read at the meeting of the Oklahoma State Medical Association, Tulsa, Oklahoma, May 7 to 9, 1961.
**Tampax, Inc.

become less severe in the latter, the greatest pain occurring early. Don't be trapped by the obvious—just because the patient has a hernia that is tender is no reason to skip a decent history; she might have an acute or gangrenous appendix lying near the neck of the hernial sac with purulent material draining into it.

Such serious accidents as abruptio placentae and rupture of the uterus and other conditions associated with pregnancy at term are excluded, because the patients involved will be under the care of an obstetrician. They are his responsibility. The general surgeon also would not have to contend with the uncommon rupture of a uteroovarian vein at term. Berger and Hill[4] reported two cases and referred to 75 others with an over-all mortality rate of a startling 50 per cent and a 75 per cent mortality rate if the rupture occurred during delivery. Postpartum hemorrhages are also in the field of the obstetrician.

APPENDICITIS

Appendicitis should be mentioned first in every discussion of acute abdominal disease, because it is the commonest lesion and because proper handling can keep the mortality rate low. Bolman and co-authors,[5] for instance, reported on 391 consecutive patients who survived rupture of the appendix. When any acute gynecologic condition is suspected, appendicitis must be considered if only to be excluded. Appendicitis occurring in the age group that is most likely to have acute gynecologic complaints follows a well-recognized pattern. Typically, parumbilical pain occur at the onset. The occurrence of fever, vomiting, or any other symptom before the pain should make one suspect the diagnosis. Nausea and vomiting usually begin after the onset of pain. The localization of pain is even more typical: within a few hours, the central, perhaps vague abdominal pains should shift and become localized in the right lower quadrant as they become more severe. Regardless of the location of the appendix, the character and shift of the pain are most characteristic.

The young teen age girl brought in by her parents with "appendicitis" represents the tricky nature of gynecology. Doctors at times seem reluctant to do pelvic examinations on these girls, yet they can be pregnant or they can have a congenital defect such as absence or atresia of the vagina with a functioning uterus spilling blood through the tubes. The cyclic nature of the pain and a careful pelvic examination should suggest the diagnosis, if other than appendicitis.

On physical examination, the signs of appendicitis are fairly typical though the degree of pain varies with the individual. Tenderness over McBurney's point, muscle spasm, and rebound pains are relatively constant; the area of greatest tenderness often is consistent with the patient's localization of the pain. The leukocyte count is not as important as it was considered to be in the past, but leukocytosis of 15,000 to 20,000 per cubic millimeter of blood would make one suspicious of a gangrenous appendix as would a marked or increasing degree of spasm or rebound tenderness. A rise in temperature and an elevation of the leukocyte count only indicate the existence of an inflammatory lesion, not its location. The sedimentation rate is a somewhat better index. It is not elevated in acute appendicitis in the early stages but is uniformly elevated in pelvic inflammatory disease.

When a pregnant woman has all the characteristic symptoms and signs of appendicitis, she generally has acute appendicitis. In the first trimester there is little confusion unless the appendix lies well over the brim of the pelvis and the tenderness is noticed only on rectal examination. By the end of

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the first trimester, however, a syndrome is sometimes encountered that may be confusing. If a round ligament is unduly thickened and taut, it may cause considerable pain but the history is not that of appendicitis; it reveals a more prolonged and gradual onset, and frequently the round ligament itself can be outlined by palpation and the diagnosis established. After the third or fourth month, the enlarging uterus lifts the cecum and appendix from their normal position. Consequently, localizing signs are more bizarre. Point tenderness remains the most important sign. In the third trimester, persistent, increasing tenderness over the entire abdominal wall may be the only sign of even a ruptured appendix that cannot be explained by other diagnoses.

Following delivery, if the patient complains of pain on one side, has localizing signs, and manifests a little fever, leukocytosis, and mild gastrointestinal symptoms, the general surgeon may be called in under the impression that the patient has acute appendicitis; for, postpartum, appendicitis again has a fairly typical onset and course with characteristic localizing signs and symptoms. One condition not generally considered is thrombosis of a broad ligament varix which causes pain, localized tenderness, and a mass. If right-sided, it can simulate acute appendicitis requiring exploration.

ECTOPIC PREGNANCY

One of the most common of the acute abdominal gynecologic emergencies is the ruptured ectopic pregnancy. It will account for more than half of the acute gynecologic problems. One in six patients with a ruptured ectopic pregnancy will be in acute shock when admitted to the hospital. The others will evidence more subacute symptoms and signs. Any degree of shock may be present. On palpation, the abdomen may be very tender and doughy with marked rebound tenderness. Spasm is not a feature if palpation is done gently without sudden movements. Any motion of the cervix or uterus on pelvic examination elicits extreme pain. The cul-de-sac may be boggy and bulging. An adnexal mass may be palpable in 25 to 70 per cent of patients according to various reports. Although a mass should be sought, its absence is not of diagnostic significance.

If the patient is in shock, her temperature may be subnormal, her pulse weak and rapid, and her blood pressure low. Blood counts are not too helpful in estimating the loss of blood, unless made repeatedly for several days. Air hunger and restlessness indicate severe loss of blood.

Typically, following acute rupture, patients can tell precisely when and where the pain began. Collapse or fainting may occur, sometimes allowing blood to reach the diaphragm. The latter causes *referred shoulder pain,* a most helpful diagnostic symptom. The possibility of pregnancy is sometimes hard to elicit from a single woman or a young girl, but patients with a ruptured ectopic pregnancy usually realize they are in a serious predicament and are willing to give truthful, direct answers. Amenorrhea is not characteristic; instead the history indicates other menstrual disturbances, such as a short period or scanty flow, followed by intermittent or daily spotting. In general, ectopic pregnancies occur so early that other signs of pregnancy, such as swelling of the breasts, may be lacking. Pregnancy tests are of little value for a patient in shock.

Pelvic appendicitis must be excluded, but the acute onset with the associated signs of hemorrhage and shock, the failure of the pain to shift, and the absence of localized tenderness all suggest ectopic pregnancy.

Torsion of a cyst with infarction can come on as suddenly and give persistent pain; but the cervix and uterus are generally not tender, a discrete mass is usually palpable, and there is no evidence of loss of blood.

If the patient is not in shock, but other evidence suggests ectopic pregnancy with slow bleeding, posterior colpotomy is an excellent diagnostic aid, provided indications for laparotomy are not overwhelming. This can be done with the colposcope, with a needle, or with a knife. The colpotomy should be done in the operating room when any incision is to be made. In the latter instance, the surgeon is concerned not only with the diagnosis but also with definitive surgical treatment either through the posterior vagina or by laparotomy. Of course, working through a colpotomy incision is troublesome, particularly in turning the uterus to get the tubes and ovaries down

where they can be inspected; but, if the bleeding is not excessive, the procedure is worth while because of the minimal morbidity and quick convalescence achieved when the lesion is controlled through the small incision.

Any patient admitted in shock with a history and physical findings suggestive of a ruptured ectopic pregnancy should be taken to the operating floor. Treatment of shock can be given while the operating room is being prepared. Sometimes we must proceed at once with the operation without waiting for the patient to come out of shock. The abdomen should be opened through a midline incision. After bleeding is controlled, blood and blood clots can be removed, and the blood volume restored; the patient's pelvis may then be explored at a more leisurely pace. Good exposure is essential, therefore all free blood should be sponged out of the pelvis. After the pelvis is clean, the decision to salvage or not to salvage the tube can be made. Until recent years the tube was always removed, often with the ovary. Now we physicians know this is not always necessary. Sometimes the products of conception can be squeezed out the end of the tube and the tube observed for persistent bleeding. Alternatively the mid-portion of the tube can be split longitudinally and the gestational products shelled out with the blunt end of a scalpel. Bleeding points may be ligated, but the tube should be left open. Of course, if a second tube is present and appears normal, one need not hesitate to remove the involved tube. It is axiomatic that the second tube should be thoroughly inspected if for no other reason than to exclude a second simultaneous ectopic pregnancy. When shock has been minimal and blood loss slight, the appendix can be removed; but if much blood has been lost, even if replaced volume for volume, the appendix should probably be left alone.

HEMORRHAGIC CORPUS LUTEUM

A bleeding corpus luteum cyst is the second commonest acute gynecologic lesion. Patients afflicted are generally young, unmarried women, and the bleeding consists usually of only a few cubic centimeters. The syndrome produced is called "Mittelschmerz," because attacks usually occur in the third week of the menstrual cycle. The onset is acute and the pain, maximal in the beginning, is generally in one lower quadrant or the other. Often the history indicates that similar pains have occurred on alternate sides monthly. The menstrual history is otherwise normal. The bleeding is rarely severe enough to cause shock and the history does not suggest ectopic pregnancy, but it is helpful to exclude the possibility of pregnancy. The abdomen may be tender, but the localizing signs characteristic of appendicitis are lacking. There is no pelvic mass to suggest a twisted cyst. If the diagnosis can be presumed, treatment is expectant and watchful waiting, for the pains should decrease and the patient should be better in a few hours. If appendicitis cannot be reasonably excluded or if signs of hemorrhage persist, exploration is indicated. The bleeding corpus luteum or follicular cyst can be readily identified at laparotomy. Since these lesions occur in young women and since in another month the pain may recur on the opposite side, the preservation of ovarian tissue is indicated. Although the lining of the cyst may have to be shelled out to allow the cyst to collapse before the bleeding can be controlled, the ovary almost invariably can be salvaged. The appendix should be removed, if present, to avoid recurrence of this diagnostic problem.

OTHER CAUSES OF INTRA-ABDOMINAL HEMORRHAGE

Ruptured Endometrioma.—One must try to exclude other causes of intra-abdominal hemorrhage and sudden pain, such as bleeding fibroids, ruptured endometriomas, or even ruptured uteri or malignant ovarian cysts. Ruptured endometriomas in particular are not uncommon; in Rochester we see at least one per year as an emergency. As endometriomas are thin-walled and adherent, torsion does not occur, but leakage or frank spillage can and does occur with the associated signs and symptoms characteristic of peritoneal insults. There is no shift in location of the pain, which is maximal at the onset. The pain may occur during a

menstrual period, shortly before or after the period, or in association with some sudden increase in intra-abdominal tension. These patients are in sufficient distress to be brought to a hospital within 24 hours, yet clinically lack the severe pain and shock characteristic of a ruptured ectopic pregnancy. Increasing dysmenorrhea and infertility are often revealed by the history. Abdominal palpation elicits some tenderness, little spasm, and possibly some thickening on one side. Rectovaginal examination may reveal such signs of endometriosis as a retrodisplaced, fixed uterus and small nodules in the cul-de-sac. These patients often require exploration.

The need for salvage of ovarian tissue depends on the age of the woman. Spillage of the mucoid, chocolate material of the cyst is no deterrent to preservation of pelvic viscera.

Leaking Fibroid.—A leaking fibroid is another cause of intra-abdominal hemorrhage. A ruptured coronary vein on a fibroid tumor is the source of bleeding. Patients may be any age, but are usually more than 35 years old. They generally know they have fibroids or a pelvic tumor. The rupture occurs on the posterior wall in fibroids large enough to have developed good sized veins. The onset is typically sudden, but the bleeding is venous and not so catastrophic as that of an ectopic pregnancy. Treatment consists of laparotomy and, usually, total abdominal hysterectomy.

Ruptured Malignant Ovarian Cyst.—Malignant cysts may rupture with consequent spillage of malignant contents, which makes the prognosis poor regardless of what is done. The immediate treatment, however, must be emergency laparotomy with hysterectomy, oophorectomy, and removal of all accessible debris from the abdomen. These patients are good candidates for treatment with radioactive gold (Au_{198}) four or five days after operation.

TORSION OF A CYST

Spontaneous torsion of a cyst may occur. In more than 50 per cent of the cases, the onset of symptoms is sudden. Although some of the women know they have a cyst, most of them come in because of pain. The pain is low, unilateral, and sometimes referred to the hip or the leg. Nausea and vomiting occur later, but there is no shift of pain to suggest appendicitis. Since cysts occur in persons of all ages, the age of the patient is of no diagnostic help. Pelvic examination reveals an exquisitely tender, unilateral mass in more than 85 per cent of the patients. Considerable spasm may be present, if necrosis occurs, but there is no evidence of blood loss to suggest ectopic pregnancy. Also, the uterus is not especially tender on motion, and usually, there is no history to suggest a complication of pregnancy. The treatment is exploration and extirpation of the ovary and tube of the affected side.

Torsion of a tube or cyst of Morgagni is a rare cause of unilateral, low abdominal pain. The tubes are often adherent at the fimbria and twisted on their longitudinal axes. Generally they are not salvageable. The little cysts of Morgagni on long pedicles probably twist often, but only rarely cause enough symptoms to warrant exploration. The same is true of epiploic tags. All of us have seen twisted fat tabs or have removed the smooth, firm, free, almost calcified "pebbles" from the cul-de-sac, yet the patients have no history suggesting an acute episode.

UTERINE FIBROIDS

Occasionally fibroids cause sufficient acute trouble to warrant classification as an emergency. At least they must be considered in the differential diagnosis of the more subacute, slowly progressing abdominal pain. Both torsion and infarction can occur. The former generally has a more acute onset with severity and progression of symptoms depending on the amount of necrosis. The diagnosis is suggested by the absence of signs of hemorrhage and the presence of a unilateral, firm, tender mass. These tumors can be large and require exploration even if the woman is pregnant. Total abdominal hysterectomy is indicated if pregnancy is not a factor; otherwise operation should be limited to salvage the pregnancy.

Infarction or hemorrhagic infarcts also cause pain of sufficient severity to require immediate treatment. Physical examination reveals an irregular uterus, one corner of which is tender. The diagnosis is suggested

by localized pain overlying an irregular area of the uterus. An interstitial ectopic pregnancy, intra-uterine pregnancy, and adnexal lesions must be considered in the differential diagnosis. Treatment consists of exploration and myomectomy or hysterectomy as indicated.

ACUTE SALPINGITIS

Acute salpingitis is still with us in spite of antibiotics; however, it is no longer the surgical disease it once was. Primarily it requires diagnosis and then medical treatment with antibiotics, rest, heat, diathermy, and procrastination. Occasionally, when the diagnosis of appendicitis cannot be excluded, a patient must have an exploratory operation. Even if pus is seen in the tubes at operation, salpingectomy is unnecessary. Leave the pelvis alone, take some cultures, and irrigate with an antibiotic solution. There is a reasonable chance that the patient will get well quickly and will have open, functioning oviducts. If one finds an old pyosalpinx that has flared up again, salpingectomy is the procedure of choice. Most pelvic inflammatory diseases occur after some stress, such as menses, childbirth, abortion, and alcoholic or sexual excess. It starts slowly with discomfort in the lower part of the abdomen. Patients affected can become seriously ill, with a high temperature, a high leukocyte count, and an elevated sedimentation rate. On physical examination, the pelvic organs are extremely tender and bilateral masses may be palpable. Often, also, signs of acute vaginal infection including a purulent discharge may be found. Localized, abdominal tenderness found in appendicitis and signs of hemorrhage found in ruptured ectopic pregnancy are not present.

If a patient does not respond to medical treatment and a mass, which fails to regress after diathermy treatment, develops in the cul-de-sac, a posterior colpotomy should be made to drain the abscess. Subsequently, when symptoms and signs have subsided, a definitive operation can be performed; but such a procedure should be postponed as long as possible to allow the tissues more opportunity to soften and the inflammatory reaction time to subside. This permits the surgeon a more conservative approach.

SUMMARY

Emergency gynecologic lesions, which general surgeons may expect to encounter, include hemorrhagic corpora lutea, ruptured endometriomas, leaking fibroids, twisted cysts, torsion or infarction of uterine fibroids, acute salpingitis, and ruptured ectopic pregnancies.

Proper management depends on accurate diagnosis, since some lesions (ruptured ectopic pregnancies and leaking fibroids) require immediate operation, and others (hemorrhagic corpora lutea and acute salpingitis) ordinarily do not require operation. Diagnostic errors often result from failure to elicit some detail in the history or failure to include part of the physical examination. Rectal and vaginal examinations, especially important in emergency illness associated with abdominal pain, are too frequently omitted.

In differential diagnosis the following deserve emphasis: the shift and localization of pain in appendicitis, the gradual regression of pain in hemorrhagic corpora lutea, and the catastrophic onset, signs of blood loss, and the exquisite tenderness associated with motion of the cervix or uterus in ruptured ectopic pregnancy.

Operative procedures should be designed to correct abnormalities without needless sacrifice of important structures. Ovaries can be salvaged in operations needed to control bleeding from ruptured corpora lutea or endometriomas. In ruptured ectopic pregnancy, the salpinx may be salvaged, after simply removing the products of conception. □

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ALLEN E. GREER, M.D.*

CLOSED CHEST cardiac massage is the most effective method of maintaining circulation whether cardiac arrest or ventricular fibrillation has occurred. The superiority of the closed technique over manual massage is clearly demonstrated in laboratory animals and by enlarging clinical experience. It is pertinent that little delay occurs between the onset of circulatory failure and the institution of therapy, as there is no hesitancy to initiate closed resuscitation. Despite repeated admonitions, manual massage of the heart was often delayed owing to a lack of fortitude in opening the chest. Closed chest cardiac massage is instituted immediately while examinations are being made to determine if circulatory failure is present and whether caused by cardiac asystole or ventricular fibrillation.

Closed chest cardiac resuscitation is performed with the patient in the supine position on a rigid support (not a bed). The heel of one hand with the other on top is placed over the lower sternum, cephalad to the xiphoid. Firm pressure directed downward should depress the sternum toward the vertebral column about 1½ to two inches. Moderate pressure with one hand in children and the finger tips in infants will suffice. The heart is compressed as a result of being relatively fixed in position by the pericardium and blood is thus propulsed from the heart. Release of the hands from the chest allows full expansion of the chest wall, at which time the heart fills. Backward flow is prevented by the heart valves. The rate of compression should be 60-80 per minute.

Adequate closed chest cardiac massage is indicated by a palpable brachial, carotid, or femoral pulse, constriction of pupils, and at times, respiratory efforts.

Simultaneously with restoration of circulation, the airway should be cleared and mouth-to-mouth, mouth-to-nose, or mouth-to-S-tube respiration performed. If only one person is present, thirty seconds of massage should be alternated with three-four ventilations of the lungs.

These measures having been instituted, an electrocardiogram will reveal whether cardiac asystole or ventricular fibrillation is present. The latter may be the cause of circulatory failure or follow cardiac standstill. Defibrillation is then performed, preferably by the external method.

Supplemental treatment of the underlying pathology, special drugs, and meticulous post-resuscitative care are essential.

Although closed chest cardiac massage will save the lives of many patients with cardiac arrest occurring during surgery, prevention of this catastrophe should be stressed. Closed chest cardiac massage has also proven efficacious in the resuscitation of patients with ventricular fibrillation in "hearts too good to die." The cause of ventricular fibrillation in normal hearts or those with infarcts, has been the cause of much speculation, and it may be that an electrical disturbance occurs which triggers off the bout of fatal ventricular fibrillation. Closed chest cardiac massage has resuscitated such hearts. It should also be lifesaving in some instances of trauma, electrocution, and drownings.

Physicians are encouraged to become informed about this new technique. A booklet, "Closed Chest Cardiac Resuscitation," and a demonstration film are available at no cost through the Oklahoma State Heart Association, 825 N.E. 13th, Oklahoma City 4, Oklahoma. □

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Dean's Message

This year the Association of American Medical Colleges is devoting its annual institute to a study of the effects of research funds on medical education. This is a timely subject, and one which even those engaged in medical research have not analyzed carefully. In recent years, unprecedented sums have been made available for medical research of faculty members and accredited scientists and clinical investigators. This is true also regarding medical training grants for a great variety of special teaching programs, the chief purpose of which is to develop competently trained personnel to conduct future clinical and scientific investigation. These grants come from national foundations and fund-raising societies, and from a number of federal government agencies.

We have been asked to comment on the role of federal funds in medical schools. Now to discuss briefly the immediate effects of the research and training funds on our educational program.

The two largest sources of assistance to our medical school are the National Institutes of Health and the Veterans Administration, the former providing funds primarily and the latter, teaching services. NIH grants have been of major assistance in supporting and developing research in all departments of the School of Medicine, in the construction of medical research laboratories, in the support of research personnel, and in financing a considerable part of the present training program for residents, fellows and graduate students.

It is only in a few indirect ways that the NIH has assisted medical schools in their serious and unsolved fundamental problem of securing support for the basic and primary task of educating medical students to be physicians. Some NIH grants are available for stipends to medical students working on research grant projects during vacation and spare time. Also, the school receives some "overhead" on most grants in order to partially offset the additional general cost which research and training programs place on our medical center. The only actual contributions to the basic operating cost of the medical school are those teaching services which are given by grant-salaried faculty members, and the transfer of expensive research equipment which remains with the school at the termination of a project.

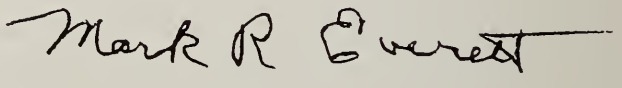
In contrast, the chief assistance rendered by our affiliated Veterans Administration Hospital is to the basic educational program for medical students. It shares in this way the objectives of a very few private foundations, namely, the National Fund for Medical Education and the American Medical Education Fund for the American Medical Association. A "Dean's Committee" Veterans Administration Hospital accomplishes this by authorizing a committee from the medical school faculty to recruit and select members for the affiliated hospital staff and

these members, in turn, become a part of the school's faculty with assigned regular teaching duties under control of various medical school departments. The affiliated hospital supports the medical school teaching program and conducts department-supervised clinical teaching through its hospital facilities. In our case, the VA Hospital constitutes a third university teaching hospital, and performs instructional services that would otherwise cost the University an additional $500,000 annually, even if the University owned the physical plant and some other agency or private source fully financed its patient care.

This discussion has been limited to federal sources of assistance according to the request, but no one should underrate the importance of developing all the possible sources of private and non-federal support to our school and medical center. While to date the federal government has no more interfered with the implementations of its assistance or with the proper conduct of the School of Medicine than has our own state government, all governmental activities are necessarily circumscribed by certain laws, by legislatures, or by Congress.

The state of Oklahoma, whose citizens are the chief beneficiaries of our school and medical center, and of its teaching hospitals, has yet to come forward with sufficient basic financial support to maintain the center. In the School of Medicine alone, a situation has developed whereby our faculty members have to raise about 80 per cent of each year's operating funds. Private and federal sources have stepped in to make funds available to medical faculties for a variety of research and medical training projects, but unfortunately someone has to pay the telephone bill. Where can our medical school secure supplementary financial aid? The only really unrestricted gifts at present are those from the National Fund for Medical Education (contributed by industry) and from the American Medical Education Fund (contributed by physicians and medical auxiliaries). It cannot be emphasized too strongly that these two unrestricted gifts are of great value in a medical school's struggle to meet its basic costs. The same would apply to any private gifts, but Oklahoma's citizens have not been thinking of their medical school as an object for private benefaction.

I wish in all sincerity to reassure friends and physicians that the University of Oklahoma School of Medicine continues to control its academic affairs through its faculty alone, and that it is influenced in no way except by suggestions of alumni, faculty members, and physicians and by the recommendations of the AMA Council on Medical Education and the recommendations of the Association of American Medical Colleges. The funding assistance obtained in our teaching program, from private and federal sources, and from the affiliation of the Oklahoma City Veterans Administration Hospital, neither changes nor interferes with the type of our medical teaching program. Furthermore, our faculty would not look kindly on any outside interference in medical education, though it will continue to give careful consideration to suggestions of merit. □



Mongolism

RICHARD E. MANSFIELD, M.D.

A review of the history, diagnostic characteristics and recent advances in the basic etiology of mongolism.

HISTORY

In 1866, J. Langdon Down from the Earlswood Asylum in England first described the entity now generally known as Mongolism in his classic paper on the "Observations on Ethnic Classification of Idiots." This first description is classical and the condition is termed Down's Disease in some countries. Although the original paper is not available for our study, numerous quotations from it are available in the later literature. Down was influenced by the dogma that such pathologic entities were often retrogressions into earlier types in the history of man.

" 'I have been able to find among the large number of idiots and imbeciles which come under my observation . . . that a considerable portion can be fairly referred to one of the great divisions of the human family other than the class from which they have sprung. . . . The great Mongolian family have numerous representatives . . . a very large number of congenital idiots are typical Mongols. So marked is this, that when placed side by side, it is difficult to believe that the specimens compared are not children of the same parents'."[11]

Oster quotes Down as to the symptomatology and psyche.

" 'The hair is not black as in the real Mongol, but of a brownish colour, straight and scanty. The face is flat and broad, and destitute of prominence. The cheeks are roundish and extended laterally. The eyes are obliquely placed, and the internal canthi are more than normally distant from one another. The palpebral fissure is very narrow. The forehead is wrinkled transversally from the constant assistance which the levatores palpebrarum derive from the occipitofrontalis muscle in the opening of the eyes. The lips are large and thick with transverse fissures. The tongue is long, thick and is much roughened. The nose is small. The skin has a slight dirty, yellowish tinge, and is deficient in elasticity, giving the appearance of being too large for the body.' Of their psyche he wrote as follows: 'They have considerable power of imitation even bordering on being mimics. They are humorous, and a lively sense of the ridiculous often colours their mimicry. This faculty of imitation may be cultivated to a very great extent, and a practical direction given to the results obtained. They are usually able to speak; the speech is thick and indistinct, but may be improved very greatly by a well-directed scheme of tongue gymnastics. The co-ordinating faculty is abnormal, but not so defective that it cannot be greatly strengthened. By systematic training considerable manipulative power may be obtained'."[19]

The next scientific report on this entity

was presented by Fraser and Mitchell at a meeting of the Medico-Psychological Association held in the Royal College of Physicians, in Edinburgh on December 14, 1875. Their report was later published in the *Journal of Mental Science.* A Doctor Ireland, who was chairman of the meeting, rejected their term of "Kalmuc idiocy," but included the entity as a special type of mental deficiency in his book, *Idiocy and Imbecility,* published in 1877.

Since that time, much of the interest in the subject has been concerned with the etiology. The theories concerning the etiology may be categorized into four main types. First, there was the theory of reversion to a primitive ancestral type such as expounded by Down. Second, others believed the condition to be due to disturbances in the uterine environment such as disease states, gestational accidents or aging of the ovum. Third, is the theory of changes within the child, especially endocrine deficiencies. Finally, there were the genetic theories involving mutations, injury to germ cells or interaction between genetic constitution and the uterine environment. Important as far as endocrine and genetic theories is the work of Shuttleworth in 1886, who termed these "unfinished children," believing that their peculiar and distinctive appearance was really a phase of fetal life. Penrose, in 1949, was undoubtedly thinking along similar lines when he proposed the term "generalized foetal dysplasia" or "foetalism."

In 1932, Waardenburg suggested that Mongolism is associated with a chromosomal aberration and specifically mentioned nondisjunction. Penrose, in 1949, suggested an unbalanced chromosomal complement might account for Mongolism. The concepts concerning the etiology of Mongolism began to change radically in 1956. At that time, Tjio and Levan with their cell culture technique, reported that the normal chromosomal number was 46 rather than 48.[1, 31] In 1959, the discovery of 47 chromosomes in Mongolism was reported almost simultaneously in France by Lejeune, in England by Ford, in Sweden by Böök and Fraccaro and in the U.S.A. by Puck. Priority of publication goes to Lejeune[12, 13] who also believed that this aberration was due to non-disjunction, although he realized that other phenomenon may be causative factors. While all appeared settled for about a year, the atmosphere was again shattered in 1960. Polani[21] and Fraccaro,[8] reporting independently in the same issue of *The Lancet,* found Mongols with a normal number of 46 chromosomes, but with definite chromosomal abnormalities which were attributed to translocation. Thus, the picture stands at the moment.

FREQUENCY AND CLINICAL MANIFESTATIONS

The frequency of Mongolism, as reported, is variable from article to article. It is really difficult to arrive at a definite figure as the diagnosis is often not made at birth. However, it is generally agreed that the entity occurs in all races and all countries. Generally, the frequency is reported to vary from one in 1,000 to one in 10,000 live births. The frequency among mental defectives in institutions varies from 2.5 per cent to as high as 13 per cent.

Numerous signs and symptoms are present in Mongols but may vary in each individual patient. The general physical appearance together with the mental retardation are characteristic for that entity only. However, there are less typical findings which are much more frequent in Mongols and their relatives than in normal persons but are not in themselves diagnostic. Such findings are referred to by some authors as microsymptoms.

Besides the characteristics mentioned in the classic description of Down, other typical findings include a small, usually brachycephalic head, unusual epicanthic folds[19] and a speckled iris. Other less characteristic and less frequent findings include many different defects of the pinna of the ear, these

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tending to be small and simplified. Flatness of the bridge of the nose is one manifestation of the cranial synostosis. Frequently, a constant nasal discharge will be observed as Mongols appear to have an increased susceptibility to upper respiratory infections. An increased tendency has also been reported in Mongols to leukemia. The teeth are commonly hypoplastic and are late in appearing. Mongol necks are short and broad. In about ten per cent of cases, a congenital heart defect is present, this usually being a septal defect. The abdomen is pear-shaped and distended due to insufficient muscle tone; umbilical hernia is frequent. In general, the extremities are short in comparison to the trunk and there is hyperflexibility of the joints and hypotonic muscles. The fifth finger tends to be short and curved. Both fingers and palms are short and relatively broad, presenting an unusual appearance. In some, the normal two main transverse palmar creases are replaced by a single four-finger-line.[19] Many authors make a tentative diagnosis by the dermal configurations.[25] There is often a large space between the first and second toe, and a deep line may extend from this space into the sole of the foot. Frequently, the third toe is longer than the second. The genitalia of female and male Mongols are usually hypoplastic. The male has hypoplasia of both testes and penis and the testes may be undescended. The female has enlarged labia and clitoris and small breasts. Mongols usually have decreased sexual drive and activity than that of the normal, and reproduction is extremely rare. The mental retardation of Mongols is very interesting. Between 5-25 per cent of Mongols are idiots (IQ 0-24), some 70 per cent are imbeciles (IQ 25-49), 4-22 per cent morons (IQ 50-69) and a few have borderline IQ's of 70-79. It has been reported that Mongols reared at home have higher Intelligence Quotients and Social Quotients.[7, 22]

Important findings are also noted on x-ray films. Although not as marked as in cretinism, there is delayed maturation of the entire skeleton. The second phalanx of the fifth finger is often hypoplastic. Usually the most characteristic finding, especially during early life, is decrease or smallness of the acetabular angles with deepening of the acetabular cups. Also, ilial wings may be large and flare laterally.

In addition to mental retardation, various central nervous system anomalies have been noted. These include reduced weight of the brain, incomplete development of the third frontal and superior temporal gyri, poorly marked secondary sulci and reduced volume of the cerebellum and brain stem. There may be reduction in number of cerebral cortical nerve cells as well as focal or diffuse diminution in myelin in cerebral white matter sometimes accompanied by a gliosis.[26]

Endocrine findings have included reduced amounts of colloid in thyroid follicles, reduced size and number of islets of Langerhans, and greater variation than normal in the size of the anterior pituitary's acidophile cells.[26] Reduced thickness of the glomerular zone of the adrenal cortex has been reported even though the adrenocortical function in the resting Mongol has been found to be normal.[18] There have been no consistent gonadal findings.

ETIOLOGY

In contrast to the confusion in the past, the basic etiology of Mongolism is now known to be definitely due to a chromosomal aberration. Hence, the definitive laboratory diagnosis may now be based on examination of cell cultures of individual suspects. There is currently a controversy on the real genetic basis of the chromosomal aberration. The main two theories at the present time are those of either non-disjunction or translocation. No doubt, other theories will be presented in the future.

Now, let us consider facts that have been known for many years and that are consistent with this genetic etiology. The maternal age appears to be a factor, as the average age of mothers bearing Mongols is 37 years compared to 29 years of age for mothers bearing normal children. There is a three per cent chance of Mongolism in pregnancies over the age of 45 compared with a 0.001 per cent under the age of 30 years. An increased familial incidence is suggested where several Mongol children are born to a mother whose maternal age is significantly lower than the average of 37 years. Decreased maternal age in relation to Mongol births is also seen where there is

an affected maternal relative. As was previously mentioned, microsymptoms are more frequent in relatives of Mongols than in relatives of normal children. Increased consanguinous marriages of maternal grandparents have been suggested as a possible cause of increased rate of Mongolism in their offspring. In monozygotic twins with Mongolism, both twins are always affected. In dizygotic twins, one individual may be normal and the other a Mongol. This strongly suggests that the entity is established before the earliest embryologic age at which a zygote may begin dividing into two embryos.

Proven facts regarding chromosomal aberration will now be considered. At the present time there is not complete agreement regarding the numbers given to the chromosomes. However, most authorities use the Denver classification, and this classification will be adopted in this presentation. In the original work on Mongolism observers reported an extra chromosome in addition to the normal number of 46. This extra chromosome corresponded in appearance to chromosome #21 of the normal individuals. Thus, there was present in the Mongol individuals of the original report a triple allele system. That is, there were three #21 chromosomes, referred to as trisomy. Most authorities believe that this trisomy can be readily explained by the process of non-disjunction.[1] In the process of non-disjunction there is nonseparation of one or more chromosomes in the reduction phase of miosis and both identical chromosomes pass to one daughter cell. The other daughter cell then has an absence of that particular chromosome. (As a correlation of this and advancing maternal age are findings in Drosphilia fly experiments. Non-disjunction was noted to occur more frequently in elderly virgin flies, and when these were bred, there was an increased incidence of exceptional males and gynadomorphs). With the finding of the extra #21 chromosome, it appears reasonable that non-disjunction may well account for this finding. However, the picture does not end here.

Recently it has been reported that there are Mongols who have the normal number of 46 chromosomes, but these individuals have an abnormal chromosomal component. Namely, one of the normal chromosomes that should be present was absent and in its place was an abnormal chromosome which in every case appeared to be the result of fusion of two chromosomes, one of these always being chromosome #21. Even in these cases, a partial trisomy of #21 was thus present. However, the process of non-disjunction hardly seems applicable here. Rather, the process of translocation seems more plausible. This process of translocation is simply the joining of one part of a broken chromosome with a part of another to form a new and complete chromosome. It does not seem unreasonable that both processes may cause this abnormal chromosomal entity in different individuals, and that other processes may be implicated in some individuals in the future. (See figures 1 and 2.)

Doctor Alexander G. Bearn in a discussion on chromosome aberrations at the Symposium on Congenital Malformations at the University of Oklahoma School of Medicine on January 25-26, 1961, stated that there were really two different types of Mongolism according to genesis.[2] The cases produced by non-disjunction tended to be random in distribution and occurred in pregnancies in advanced maternal age, while those caused by translocation tended to be associated with an increased familial incidence and in mothers of earlier ages. Parents and some realtives of Mongols of the translocation group were phenotypically

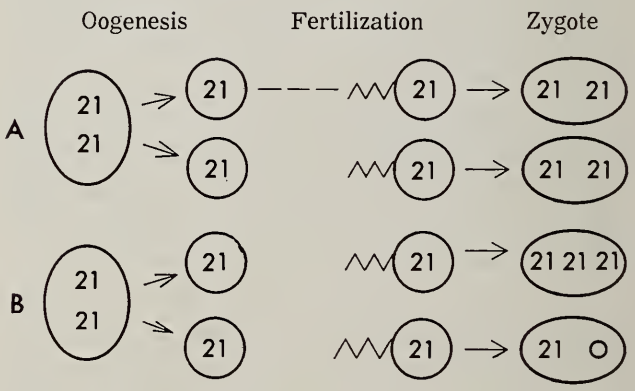


Illustration of Non-disjunction (Modified from Bearn[1]).
A—Normal
B—Non-disjunction with trisomy of chromosome #21

Figure 1

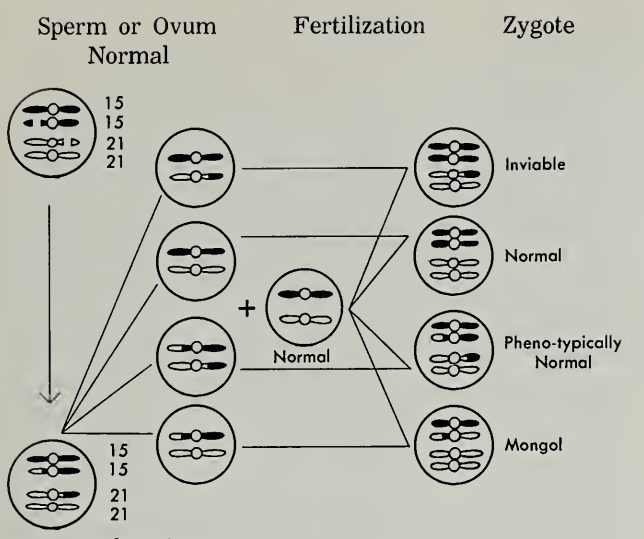


Illustration of Translocation as a cause of Mongolism. (Modified from Polani[21].)

Figure 2

normal but chromosomally distinct, some cases being reported with 45 or 47 chromosomes.

The entity of Mongolism now appears to be due to the presence of trisomy or at least partial trisomy of chromosome #21. Several interesting speculations by which the trisomy may produce Mongolism will be considered. First, there is the possibility that trisomy *per se* in an unknown way produces Mongolism. In this respect Warkany[26] states that there is the theory that Mongolism may be a dosage effect resulting from excess production of a substance or substances ordinarily formed or influenced by genes of chromosome #21. Another theory that has been proposed is that only some #21 chromosomes carry genes that when present in sufficient numbers cause Mongolism. The theory of dosage effect seems more plausible since it is presently believed that much of the control of metabolism arises from genetic information carried in chromosomes. Thus, it would not be unusual if some abnormal metabolic changes were present in this condition characterized by the chromosomal abnormality of trisomy of #21.

Indeed, abnormal metabolic changes have been found to occur and undoubtedly many more of such changes will be noted in the future. One of the abnormal metabolic changes reported in Mongolism is an elevated serum gamma globulin of statistical significance, and this gamma globulin has been found to increase as the Mongols grow older. (Although this may be a true metabolic change, one must take into account the increased number of respiratory infections which Mongols have and hence possible increased antibody formation.) Elevated serum lipid and lipoproteins are reported by some authors.[4, 23] Abnormalities in tryptophan metabolism have recently been reported.[17] Carver et al. reported impaired vitamin-A-in-oil absorption and elevated urinary excretion of B-aminoisobutyric acid found by other workers.[6] Also, significantly lower serum calcium and higher serum organic phosphate have been reported[34] as have changes in the differential leucocyte count.[15] Other changes such as cranial anomalies and endocrine changes have been discussed previously.

TREATMENT

The treatment for Mongolism is non-specific. Schuller, in 1907, coined the term "acromicria" and pointed out that the physical defects were just the opposite of acromegaly. In the past, persons adhering to Schuller's belief, treated Mongolism with pituitary extracts with varying results, but at no time was the condition definitely changed. Perhaps, with future research prevention and therapy will become more satisfactory.

At the present time, one of the most encouraging and important problems is the care of the Mongol. All authorities do not agree on the long term care of Mongols. A definitive diagnosis is usually not made in the newborn nursery. If Mongolism is suspected, most authorities agree that the parents should be warned that the child may be slow in developing. Gradually the parents realize that they have an "exceptional child" and will adjust accordingly. They must be given time to contemplate and should receive a thorough explanation regarding the condition from their physician as the child grows. Finally, suggestions for the need for institutional care should be given as the need arises. As has been pointed out before, Mongols have a pleasing temperament and require a protected environment, which can readily be found in most homes. As first demonstrated by Quaytman[22] and later by

the Centerwall & Centerwall,[7] mongols reared in the home until at least two and one-half years of age showed significantly higher Intelligence and Social Quotients than Mongols of similar ages who were institutionalized earlier. These authors state that home-reared Mongols were much more trainable than those placed in institutions in early life. It would appear that society may be greatly benefited and costs of maintaining such persons in their later years decreased, if no Mongol was taken away from the home until after the age of three years or more. There are several recent articles for parents of Mongols to read.[28, 29, 30]

THE FUTURE IN MONGOLISM

The future appears unlimited in the study of Mongolism, but future endeavors will differ much from past studies. With the discovery of the basic cause, the trisomy of chromosome #21, the field of human genetics opened a new frontier. It is likely that the process under control of the genes of #21 cause, or have a great deal to do with the cause, of Mongolism. Undoubtedly, these genes and their processes may produce definite abnormalities in the processes and pathways under their control in addition to the production of Mongolism. It is possible that investigators will be studying multiple systems and not just single systems. Eventually, much may be learned about both the genes and basic processes concerned with in chromosome #21. After the above discoveries, the area of research has been opened for further investigation of processes controlled by other chromosomes. The horizon has been approached, but the view appears unlimited. □

(I wish to express my appreciation to Doctor Neil Kirkman and Doctor Lucius Waites for their constructive criticism in the preparation of this manuscript.)

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ABSTRACTS

A Peregrinating Problem Patient

Warden M. Rimel* and Chester M. Pierce**

Diseases of the Nervous System, 22: 1-6, March 1961

In answer to the plea by internists for psychiatrists to study Munchausen's syndrome, a case study is presented. The patient is a 39 year old man whose life history was obtained from medical and social agencies, as well as interviews with the patient and his family. This material includes a psychiatric evaluation that the patient had when he was aged nine. Birth injuries and environmental privation may have contributed to the etiology of this case.

The patient's life has been characterized by frequent peregrinations with intervening periods of confinement in prisons and hospitals. Admission to the hospitals is accomplished by fraud. Often there has been a premature discharge as result of the patient's own provocations.

Psychodynamically, this man directed his life toward satisfying an insatiate need for attention, utilizing masochistic swindling for force gratifications from his environment. His behavior was directed also toward a denial of mediocrity. The peregrinations seemed to serve as a means of thwarting suicide.

Management of such patients is compounded by: 1) the difficulties in making a diagnosis, and 2) the inability to procure legal power to confine the patient for long term care. Treatment suggestions include the use of individual, group, and milieu therapy as well as social service and vocational counselling.

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Massive Hemolysis in Extracorporeal Circulation

Howard B. Keith,* Earl Ginn,** G. Rainey Williams*** and Gilbert S. Campbell****

The Journal of Thoracic and Cardiovascular Surgery 41: 404-407, March 1961

1. Massive hemolysis following cardiopulmonary bypass has been encountered in two consecutive patients.

2. Laboratory investigation indicates the presence of an unstable hemolytic agent in a single segment of plastic tubing.

3. This experience suggests the need for routine testing of new segments of plastic tubing.

4. Treatment of these patients with cortisone, sodium lactate, urea, and exchange transfusions has been effective.

*Resident Surgery—V.A. Hospital.
**Clinical Investigator—V.A. Hospital.
***Assistant Professor of Surgery.
****Professor of Surgery.

Some Preliminary Studies of "Stress" in the Western Diamondback Rattlesnake (Crotalue Atrox)

Russell Allen,* L. G. Gumbreck** and M. R. Shetlar***

Proc. Okla. Acad. Sci. 40: 19-21, 1960

Histological changes and increases in weight were noted in the adrenal glands of all experimental animals. Changes were also noted in the serum electrophoretic patterns of these animals. It is suggested that these changes are due to the stress mechanisms.

The changes observed in the histological structure and weight of the thyroid glands of the experimental animals are interpreted as normal physiological responses of that gland to higher temperatures.

*Junior Medical Student.
**Assistant Professor of Anatomy.
***Professor of Biochemistry.

Response to Cortisone Predibetes Glucose- and Steroid-Glucose Tolerance in Subjects Whose Parents Are Both Diabetic

Kelly M. West*

Diabetes, 9: 379-385, Sept.-Oct., 1960

Subjects whose parents were both diabetic were studied with respect to glucose tolerance and cortisone-glucose tolerance. The status of glucose tolerance was known or tested in forty-six of these individuals whose ages averaged thirty-seven years.

In fourteen (29 per cent) glucose tolerance was impaired. These data were compatible with the notion that the incidence of genetic susceptibility to diabetes in this group approaches 100 per cent.

Cortisone-glucose tolerance tests were performed in twenty-six persons with normal glucose tolerance whose parents were both diabetic. Their responses to cortisone were not significantly different from those of a control group with normal glucose tolerance and no family history of diabetes. Seven other subjects whose parents were both diabetics were not tested after glucose alone, but had steroid-glucose tolerance tests. Four had cortisone-glucose tolerance tests and three had prednisone-glucose tolerance tests. The results of all seven tests were normal.

Cortisone-glucose tolerance tests were performed in twenty-six subjects with slight impairment of glucose tolerance. Their responses to cortisone were normal.

Thees findings sugest that individuals with prediabetes are not unusually responsive to the hyper-glycemic effects of cortisone when it is administered by the technic of Fajans and Conn.

*Asistant Professor of Medicine.

medical center

Effects of Parathyroid Extact on Serum and Kidney I. Effect on Sulfur-35 Incorporation Into Components of Rat Serum and Kidney

Regan H. Bradford,* R. Palmer Howard,** Walter Joel*** and M. R. Shetlar****

Biochemical and Biophysical Research Communications 1: 350-351, Dec. 1959

Rats were given injections of radioactive sulfate in the form of sodium sulfate. Seventy-two hours after the first injection parathyroid extract injections were stated and given in divided doses for three days. Radioactivity was found to be approximately twice as high in the serum of parathyroid treated animals as it was in control animals. Much of the increased was not dialysible. Increased radio activity was also found in the kidney. Most of the radio-activity of serum was found in the albumin and the β-globulin fractions.

These data support the hypothesis that parathyroid extract causes a breakdown of bone matrix or other connective tissue and that this material is found in the kidney lesions occurring after PTE administration.

*Assistant Professor of Biochemistry.
**Associate Professor of Research Medicine.
***Professor of Pathology.
****Professor of Biochemistry.

Effects of Parathyroid Extract on Glycoprotein and Mucopolysaccharide Components of Serum and Tissue

M. R. Shetlar,* Reagan H. Bradford,** Walter Joell*** and R. Palmer Howard****

The Parathyroids 144-155, 1961

The possible mechanism of PTE action upon tissue glycoprotein and mucopolysaccharides is particularly nebulous. Chemical observations do not fit well the simple postulation that the extract causes a depolymerization of the bone matrix to more soluble components which pass into the blood stream. A hypothesis at least equally tenable is that PTE causes an increase in cells (or a redifferentiation of cells), which produces acid mucopolysaccharide. During this process glycoproteins rich in bound neutral carbohydrates are released from the bone matrix or their production stimulated. Due to increased production, a limited amount of the acid mucopolysaccharide also enters the blood stream and finds its way to the kidney. Further studies of bone and soft tissue mucopolysaccharides and glycoproteins as affected by parathyroid extract are indicated. Studies of different parathyroid fractions in this relationship are also indicated.

*Professor of Biochemistry.
**Assistant Professor of Biochemistry.
***Professor of Pathology.
****Associate Professor of Research Medicine.

FACULTY NEWS

Carl Nau, M.D., Will Head Institute of Environmental Health

Carl August Nau, M.D., recently appointed professor of preventive medicine and public health, has arrived at the Medical Center to establish an institute of Environmental Health made possible by the Center's first grants from industry.



NAU

Doctor Nau came here from the University of Texas Medical Branch, Galveston, where he headed the Department of Preventive Medicine and Public Health for 20 years.

A graduate of the University of Chicago School of Medicine, Doctor Nau earlier (1930-36) was on the OU medical faculty, leaving here to join the staff of the Texas State Department of Health. He has been active in the occupational health field 24 years; is an associate editor of *The Archives of Environmental Health* and a member of the Committee on Toxicology of the National Research Council.

The Medical Center received gifts totaling $81,500 to launch the Institute, which will conduct a program of teaching, research and service to industry. Occupational health will be taught medical students, practicing physicians, engineering students and others with an interest in the impact of man's environment on health.

Funds were given by Kerr-McGee Oil Industries, Oklahoma City; Phillips Petroleum Company, Bartlesville; Monsanto Chemical, St. Louis, Missouri; The Cabot Corporation, Boston, Massachusetts; Sid Richardson Carbon, Fort Worth, Texas; United Carbon and Continental Carbon, Houston, Texas; Columbian Carbon, Trenton, New Jersey; J. M. Huber Company, Borger, Texas; and Atlas Powder Company, Wilmington, Delaware.

Moneys, matched by a grant from the National Institutes of Health, will be used to complete and equip the unfinished top floor of the Center's new research building to house the Institute. □

OSMA JOURNAL/special

Taxpayer Opposes Socialized Medicine

STEVE STAHL

In testimony before the House Ways and Means Committee, a leading conservative from Oklahoma City speaks out against H.R. 4222.

My name is Steve Stahl. I reside at 1919 Northwest 33rd Street in Oklahoma City. I am Executive Vice-President of the Oklahoma Public Expenditures Council.

The Council is a privately supported, state-wide, citizen-taxpayer organization composed of members—from virtually every interest and activity in our great state—who are interested in good, effective, efficient and economical government at local, state and national levels.

I appear before you today as a witness opposed to the legislation under consideration which seeks to commit the federal government to a program of providing medical care for *all* persons eligible for Social Security benefits regardless of need.

Certainly, we cannot deny or ignore the necessity of providing good medical care for all American citizens regardless of age or income.

I am old-fashioned enough to believe that this responsibility rests first with the individual; second, with the family unit; third, with voluntary private charity organizations; and, as a last resort, with compulsory public charity.

As an example, I sincerely believe that financially able adult children have a moral obligation to care for their parents. I do not believe this moral responsibility can be met by transferring it to a governmental agency—which is exactly what too many American people are doing or seeking to do today.

In this connection, so far as I know, in all the surveys and studies published by both those who support and those who oppose this legislation, no attempt has been made to determine the ability of adult children to provide medical care for parents who are unable to provide such care for themselves.

I suspect that such a study, plus a return to family responsibility, would quickly reduce this medical care mountain to a molehill.

However, regardless of the size of the problem, we already have a governmental program by which to provide medical care for those who actually need it. I refer to the Kerr-Mills bill, which was carefully drafted by the distinguished Chairman of this Committee and Oklahoma's senior and equally distinguished Senator, Bob Kerr.

Our State Welfare Director, Mr. Lloyd E. Rader, informs me that this program is meeting our needs in Oklahoma in a satis-

House Ways and Means testimony, August 1, 1961.

factory manner. Since it is meeting the problem in Oklahoma, there is no reason why it cannot effectively meet the needs in the other 49 states.

At least this program deserves a reasonable time trial before being replaced by the plan which is being considered here—

—a plan which, by no stretch of the imagination, can or should be labelled as a prepaid medical program.

—a plan which limits coverage to those who are eligible for Social Security benefits regardless of need and makes no provision for those not on Social Security who may be in dire need of assistance.

—a plan which commits the federal government to a program, the cost of which can only be a matter of conjecture but which is certain to exceed original estimates by many billions.

—a plan which will open the door to the same abuses and chiselling which are now prostituting efforts to care for our less fortunate citizens in almost every facet of our present Social Security program.

In case there is any question about these last two items, let's look at the record.

With regard to cost, when the Social Security Law was passed in 1935, it was estimated that benefit payments in 1955 would amount to less than a billion dollars. However, actual payments were over five billion, or nearly six times the original estimate. Again in 1943, Social Security actuaries estimated benefit payments in 1957 would total $1.2 billion but they actually amounted to more than seven billion.

Is there any reason to believe that a medicare program under Social Security would not follow the same pattern?

With regard to abuses, I need only point to the Aid-to-Dependent Children program which can only be classified as a national disgrace.

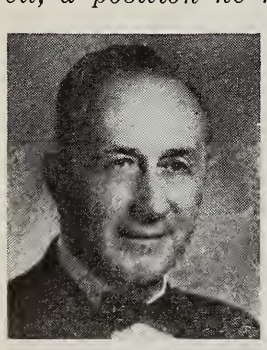
This program was originally designed to keep families together in homes in which the bread winner was either dead or incapacitated. Today, less than one-third of this billion dollar a year program is spent for this purpose; more than two-thirds is spent to provide for children deserted by their fathers, living in broken homes or born out of wedlock.

The Department of Health, Education and Welfare predicts this situation will worsen in the future and, regrettably, it has successfully resisted efforts by a number of states to curb these abuses.

You may also recall that the Old Age Assistance program was to be operated only long enough for the OASI program to become fully effective. However, in December,

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Steve Stahl is Executive Vice-President of the Oklahoma Public Expenditures Council, a position he has held for the past 14 years. He served as Chairman of the National Taxpayers Conference for 12 years.



Before coming to Oklahoma, he was Executive Director of the Arkansas Public Expenditures Council for four years and previously had served both the Ohio and Missouri state taxpayers associations as Director of Public Relations.

Mr. Stahl is the recipient of a George Washington Honor Medal Award by Freedoms Foundation for his "Voice of the Taxpayer" television series on Economic Education as "an outstanding achievement in helping to bring about a better understanding of the American way of life in 1959."

He has been affiliated with the citizen-taxpayer movement for the past 23 years, and prior to that spent some 18 years in newspaper work, mostly as a special assignment and political writer in Ohio.

Mr. Stahl has served as a member of the Board of Directors of the Citizens Committee for the Hoover Reports and as a member of the Board of Trustees of the Governmental Research Association, a national organization of professional people engaged in the related fields of governmental administration and research.

He is a veteran of World War One and a member of the American Legion. He is now serving as President of the Downtown Kiwanis Club of Oklahoma City where he resides.

1946, there were 2,195,806 persons on OAA as compared to 2,318,128 in March, 1961.

Another major objection to this legislation is that it will increase the burden of federal taxation which is already bleeding the poor as well as soaking the rich. This proposed tax increase would impose an additional hardship on the nation's wage earners who are already paying more in taxes than they are for food, clothing and medical care.

Mr. Chairman, in conclusion, I contend the greatest favor we can extend to the people this legislation seeks to help is to preserve the purchasing power of their dollars. In order to do so we must stop fanning the fires of inflation with federal spending fans.

Perhaps the most compelling question which must be considered by this Committee and the Congress is the total amount of responsibility the federal government can assume in providing for its citizens without impairing its ability to protect our nation and preserve our freedom in this chaotic world.

There will be no security—and very little medical care—for any of us in a bankrupt or vanquished America.

Thank you for permitting me to present these views for your consideration. □

Health Bill Given High Priority

The defeated Anderson-King Bill, a measure to provide hospital, nursing home and limited medical care to the nation's 14 million social security recipients, will be back again next year—and is given a better-than-even chance to pass. Election-minded lawmakers, anxious to please their constituents, are likely to use the medical care program as a means of liberalizing social security, a traditional maneuver during election years.

To make matters worse, President Kennedy recently promised to place the "highest priority" next year on an aged health care program financed through social security. In response to a letter from Senator Pat McNamara (D., Mich.), advocate of socializing health care for the elderly, Kennedy said: "I wholeheartedly agree with your belief in the importance of this legislation to the nation. I assure you that I intend to recommend that this legislation be given the highest priority at the next session of Congress."

Proponents of legislative action along the lines of the King Bill or the old Forand Bill are hard at work to lay early groundwork for eventual approval. For example, Senator Jacob Javits (R., N.Y.) is urging that Republicans and Democrats use the present congressional recess to meet and work out compromise legislation which would gain endorsement from both parties. He feels that coverage of all aged persons, not merely those on social security, might be the answer. Also, he suggests that preventive care, including physicians' services, could well be added to the benefits of the legislation.

Former Democratic Congressman Aime Forand of Rhode Island, original author of this type proposal, is now pushing for legislation from a different post. He has just announced the formation of a National Council of Senior Citizens for Health Care Through Social Security. Object: To lobby for the goal its name specifies.

AMA officials, while admitting that there will certainly be increasing pressures from the Administration and liberal lawmakers, are not ready to throw in the towel. They are reminding physicians and their many allies that big legislative battles have been fought and won before. However, they are predicting that only an all-out effort, necessarily rising from the grass roots level, will dissuade Congress from socializing health care for the aged segment of the population.

Counterfeit Doctors: A National Problem

Following an examination and treatment for prostatitis, the southern Oklahoma rancher asked the clinic's bookkeeper if he could see the physician again for a minute. "Doc," he said, "I just wanted to thank you for the discount—six dollars is plenty cheap."

"But you received no special favor," the physician replied, "that's my regular fee for this service."

The rancher expressed surprise, then explained that he had been going to an Oklahoma City chiropractor for his "cancer" treatments—at $100 a visit. Incensed by the fraud, the doctor did some checking and found that the chiropractor was administering a quack cancer cure called the Koch Shot. He made an effort to have the rancher file charges, but was unable to overcome the man's reluctance to make public the fact that he had been duped.

Similar anecdotes are occurring thousands of times daily across the United States, as medical quackery flourishes into a billion dollar business.

AMA Campaign

The American Medical Association's Department of Investigation, founded 55 years ago, has earned a reputation as the "medical watchdog" of the country by waging a continuing battle against quacks and charlatans and their nostrums and gadgets. It maintains the nation's most complete quackery files, containing more than one million references, and has effectively used this information to educate Americans against falling prey to those who capitalize on illness.

Recognizing that quacks and charlatans thrive in the dark shadows of public ignorance, the AMA has used the media of newspapers, magazines, radio and television to put the public on guard. AMA-produced exhibits and films, plus lectures by staff members, are also employed in the education program aimed at both physician and laymen.

Despite such efforts, however, and regardless of the intense campaigns of such enforcement agencies as the Food and Drug Administration, the Federal Trade Commission, the Post Office Department and state medical boards, medical quackery continues to feed on the gullibility of otherwise well-informed people, who waste millions of dollars annually on fake cures and cure-alls. Worst of all, many victims delay seeking competent care until they suffer permanent injury to their health.

As an example of the scope of the problem, Americans are now spending $250 million annually on fake arthritis and rheumatism cures. Cancer quackery, most notorious crime of all, annually reaps $100 millions for its cruel promoters. While over-the-counter vitamins may not fall strictly within the definition of quackery, they nevertheless represent a $350 million annual layout of questionable worth.

To Catch a Quack

To meet the ever-increasing challenge, the AMA has stepped up its activities in recent years. Now, it stands on the brink of launching a new and even more vigorous attack on health care charlatans, inaugurating the effort by staging the First National Congress on Quackery this month in Washington, D.C.

Arranged in cooperation with the Food and Drug Administration, the meeting was designed to focus the national spotlight on medical skullduggery. At this writing, the final outcome of the conference cannot be reported, but it is expected that participants will recommend ways and means of establishing closer liaison between Federal and local programs of enforcement, with particular emphasis on clearing up false and misleading advertising. For its part, the AMA Department of Investigation has already laid plans to increase its liaison and supportive activities with state medical societies. In addition, an information program is planned for educational institutions.

Quackery and Quacks

Counterfeit doctors have become specialized. Their major divisions of activity include: Mechanical quackery (promotion of devices and gadgets for the diagnosis and treatment of all human ills—some popular items are illustrated on the facing page); nutritional quackery (door-to-door diagnosis specialists, who believe all ailments are caused by improper eating, and who offer their "patients" bizarre foods or food supplements with "guaranteed" across-the-board curative powers); and last but not least, the cancer quacks, who use a variety of techniques to profit from distraught individuals who have, or think they have, cancer.

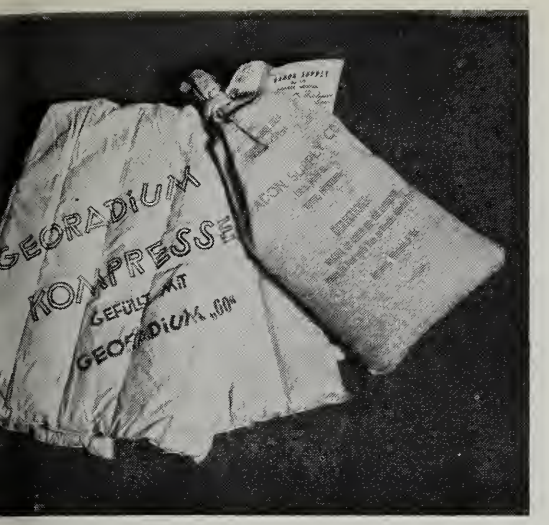
For the most part, medical quacks are uneducated confidence men, successors of the wandering medicine man of earlier days, and equally successful in keeping one step ahead of the law. Others are licensed renegades in one of the branches of the healing arts. Regardless of their educational level or status of licensure, all have one thing in common—they are slippery.

In all of its educational literature on the subject, the AMA has warned the public to beware of phonies who—

- Use special or "secret" machines or formulas.
- Guarantee quick cures.
- Advertise or use case histories and testimonials to promote their cures.
- Clamor constantly for medical in-

(Continued on Page 572)

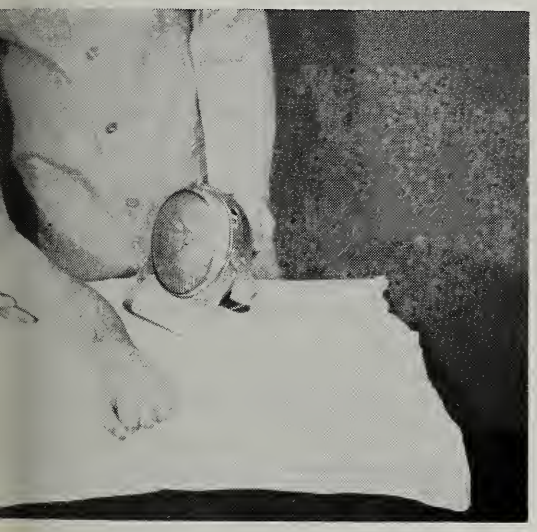
Products of Quackery



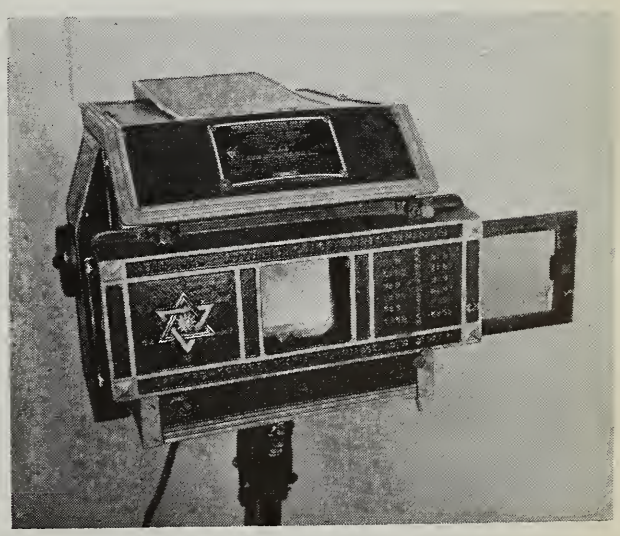
RADIOACTIVE ORE: Claims are made that devices filled with radioactive ore will cure many chronic diseases, especially arthritis and rheumatism. Geiger counters show that such devices are usually less radioactive than the luminous dial of a wristwatch. Bags, pads, mattresses, pillows, cabinets, uranium mines, tunnels and ditches are promoted.



RADIOCLAST: The quacks who use the Radioclast say it can detect "vibration rates" of body organs and diseases. They claim they can diagnose by "tuning in" and treat by "normalizing" vibrations. Like similar "radionic" devices, it has been examined by scientific and electronic experts and branded fraudulent.



DEPOLARAY: The Depolaray has been represented as effective in the treatment of more than 100 diseases. Government reports reveal it is essentially a weak electromagnet. It is often used in connection with a mail order diagnostic scheme. In 1954 a federal court decree banned interstate shipment of the Depolaray.



SPECTRO-CHROME: Dinshah P. Ghadiali invented the theory that good health could be retained or regained through "attuned color waves." Then he invented a machine to do the "attuning." It was the Spectro-Chrome. A metal box on a stand houses a 1,000 watt light bulb. Panes of colored glass slide in front of the bulb—different colors "treat" different diseases. Ghadiali's victims had to join his Institute and pay a $90 membership fee in order to get the machine—free.



DROWN INSTRUMENTS: Chiropractor Ruth B. Drown promoted several "radio vision" and "homo-vibra ray" instruments she claimed could diagnose and treat illness. "Emanations" from a blood spot on file with the practitioner are supposed to permit "absent" treatments. In 1951 Ruth Drown was found guilty of violation of the federal food and drug law for causing a misbranded instrument to be introduced in interstate commerce. She was fined $1,000.

(Continued from Page 570)

vestigation or recognition.

- Claim medical men are persecuting them or are afraid of competition.
- Say surgery, x-rays and drugs will cause more harm than good.

Notable Accomplishments

Throughout its history, the AMA Department of Investigation has established an impressive record in its anti-quackery activities. The list of victories resulting from its cooperative investigations with law enforcement agencies reads like a "Who's Who of Medical Quackery."

In 1936, the Department exposed the infamous John R. Brinkley who, among other things, claimed to rejuvenate elderly men with goat glands. In 1953, after four years of work, the Department was successful in forcing the retirement of Jacob Sass Schirmer. Passing himself off as a physician, Schirmer was promoting the quack treatment of cancer and leukemia by recommending the inhalation of bacteriophage.

More recently, the AMA was instrumental in closing down the Hoxsey cancer operations, but only after the fakery bled its victims for over $50 million in worthless treatment.

Other AMA investigations have brought beneficial results, but the key to the whole problem lies in a concerted grass roots attack on quackery. If citizens will rise up and quickly stamp out charlatans at the community level, before they gain momentum, the AMA and Federal enforcement agencies will have a much easier task. Oliver Field, Director of the AMA's Department of Investigation has said, "Although we have been reasonably successful in our national campaign against quackery, we must not stand pat, or even settle for the status quo. To work toward the ultimate goal of abolishing quackery, we must gain the complete support of state and county medical societies and their local governments."

The Oklahoma Scene

Oklahoma has not been without its share of medical shenanigans. AMA files contain histories of several local quacks who were subjects of Food and Drug Administration activity, among them Tom G. Sanders, formerly of Wanette, who marketed a product consisting of ground hoof, horn, or other external animal growth suspended in diluted milk. The "cure" was recommended for everything from cancer to gas-on-the stomach.

Sanders was ordered to stop shipping his material in interstate commerce, and later was fined $500 for violating the injunction. Although Sanders himself is now deceased, recent reports indicate that his daughter and son have revived the same old racket.

What can be done about health care quacks who operate within state boundaries and thereby escape the jurisdiction of Federal authorities? Bill Harkey, attorney for the Oklahoma State Board of Medical Examiners, has this to say:

"I believe the present Oklahoma laws are adequate, but the enforcement of them could be improved. Since the key man in the enforcement of all laws is the county attorney, physicians in every county medical society must see to it that attorney is kept well-informed on medical goings-on. And while they are at it, it would help matters considerably if more county societies would make a direct effort to establish good rapport with this key law enforcement officer, even to the extent of offering election campaign support."

Harkey explained that the Board of Medical Examiners is somewhat limited in its enforcement power. "We can seek injunctions against non-licensed persons masquerading as physicians," he said, "but, if the offender violates the injunction, as frequently happens, criminal contempt proceedings must be handled by the county attorney."

Physicians who discover evidence of medical quackery, whether being performed by laymen or licensed practitioners, should contact the county attorney, supplying details and the names of witnesses. If witnesses are reluctant to testify, the county attorney may subpoena them and take written statements without divulging where he obtained their names.

"The Board and most county attorney offices are not staffed to the extent they can survey all medical practice activities in the state," Harkey concluded, "so we must rely heavily on the cooperation of physicians at the community level." **See President's Letter, this issue, for further suggestions.** □

Medical Aspects of American Habits Topic For AMA Meeting

Every physician is well aware that the personal and group habits of his patients in their everyday lives have a profound effect on the health of the individuals.

A group of Denver physicians, plus a colleague from Wyoming, will present a study of medical aspects of American habits as a highlight of the program of the 15th annual clinical meeting of the American Medical Association, November 26-30 at Denver.

William Covode, M.D., of Denver is chairman of the section. The program will include such topics as "The Coffee Break," by E. Chester Ridgway, M.D., Cody, Wyoming; "The Psycho-Stabilizers," by Jack O. Stoffel, M.D.; "Psycho-Sexual Aspects," by Bradford Murphey, M.D.; "The Pet in the House," by Francis T. Candlin, D.V.M.; "Automobile Driving," by Horace E. Campbell, M.D., and "The Cocktail Hour," by Clyde E. Stanfield, M.D.

Chemotherapy in cancer, an area in which knowledge is growing rapidly, will be another important feature of the clinical meeting program.

Subjects in this area will include "A Survey of Chemotherapeutic Agents in Malignancy," "Chemotherapy of Leukemia and Malignant Solid Tumors in Children," "Chemotherapy as an Adjuvant to Cancer Surgery," and "Enhancement of Radiotherapy by Oral Methotrexate." □

Board of Trustees to Meet October 22

President Clinton Gallaher, M.D., has called a meeting of the OSMA Board of Trustees for October 22nd at the association headquarters building. The meeting, first since Gallaher took office last May, is expected to clear the way for several new association projects, as well as to provide an opportunity for reporting on other medical organization activities.

Highlighting the meeting will be the inauguration of the association's Medical Education Encouragement Program, approved by the House of Delegates last Spring and now made ready for implementation by the Medical School Liaison Committee.

According to Gregory E. Stanbro, M.D., committee chairman, the Trustees will be asked to get the program started; a program designed to interest a greater quality and quantity of highschool students in the pursuit of careers in medicine. The plan calls for the appointment of medical education counselors for each highschool of the state. Physicians serving as counselors will appear before highschool science and premed clubs to provide students with facts about medical careers, with particular reference to the University of Oklahoma School of Medicine.

A folder on the subject, prepared by Stanbro's committee and the medical school, will be made available to all interested highschool students. "The whole idea," Stanbro said, "is to meet growing competition from industry, and attract the best possible students for our medical school."

In addition to the medical education program, other agenda items include: Reconsideration of Blue Shield Coverage for Physicians; Report on Annual Meeting Plans; The Reorganization of OSMA Fiscal Policies and Procedures; Ratification of Appointment to the Editorial Board; Association Sponsorship of Selected Essay Contests; Reports from AMA Delegates and Alternate Delegates; Progress Reports from Selected Council and Committee Chairmen; and, Consideration of OSMA Plans for the Clinical Meeting of the AMA, slated for November 26-30 in Denver.

"I am hopeful that this meeting of the Board of Trustees will set the stage for a productive year of association activities," Gallaher said. □

12th Annual Conference on Disaster Medical Care to Be Held in Chicago

The 12th County Medical Societies Conference on Disaster Medical Care will be held in Chicago, November 4-5, at the Palmer House.

Gifford Henry, M.D., Tulsa, Chairman of the OSMA's Disaster Medical Care Committee is encouraging county society civil defense chairmen to make the trip. "Increased national civil defense interest, in the wake of intensifying world problems, gives us an opportunity to take advantage of the momentum and really get something done at the local level," he said.

"A How Do You Do It at the County Level" is the basic theme of the national meeting which is sponsored by the Amercan Medical Association's Council on National Security.

The two-day conference will be divided between symposiums and regional workshop sessions. One symposium will be devoted to "The County Medical Society and Disaster Medical Care." A second will include pertinent topics under the general heading of "Training of Allied Health Professions and Services." Regional workshop groups will have a wide variety of topics for discussion designed to acquaint the participants with disaster planning at the city, county, state and relional levels.

Write OSMA for details. □

Progress Made on Annual Meeting

Encouraging reports from J. R. Stacy, M.D., General Chairman, and Rex Kenyon, M.D., Program Chairman, indicate that the OSMA's 1962 Annual meeting scheduled for May 5, 6, and 7 in Oklahoma City, will be one of the association's finest. A diversified program, improved meeting facilities and a public "Town Hall" meeting featuring movie star Ronald Reagan will highlight innovations in store for registrants. The meeting is labeled by planners as a "Three Ring Circus" of scientific, socio-economic and social activities.

All scientific and social events will be held in the Skirvin Hotel and Skirvin Tower, rather than using the customary facilities of the Municipal Auditorium. The convenience of having most activities in the same location is expected to increase attendance to the scientific program. Also, the weekend meeting dates were selected to enhance good attendance.

Scientific and socio-economic presentations will be offered in three separate meeting rooms, with the programs running concurrently. The large Venetian Room of the Skirvin Hotel will accommodate lectures from eleven distinguished speakers, and the Monterey and Regency Rooms will house presentations on scientific subjects of special interest as well as discussions of socio-economic matters.

Specialty societies are now selecting the guest speakers. Those confirmed to date are: Robert A. Aldrich, M.D., University of Washington—Pediatrics; Irving Ariel, M.D., New York City—Surgery; James H. Ferguson, M.D., University of Miami—OB-Gynecology; Willard E. Goodwin, M.D., University of California—Urology; Robert Kierland, M.D., Mayo Clinic — Dermatology; Lawrence J. McCormack, M.D., Cleveland Clinic—Pathology; and Malcom H. Stroud, M.D., St. Louis—E.N.T. Additional speakers will represent the fields of surgery, psychiatry and internal medicine.

(Continued on Page 574)

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Reagan will appear at the Municipal Auditorium Sunday evening, May 6th, to address a public gathering of an expected audience of 3-4,000. A well-known conservative, he may be counted upon to attack socialism in general, and socialized medicine in particular. □

Postgraduate Committee Announces Eight Courses

Oklahoma physicians will have top-quality postgraduate education delivered to their doorsteps this year—through a program announced September 20th by R. R. Hannas, M.D., Sentinel, Chairman of the OSMA's Committee on Postgraduate Education.

The plan calls for eight decentralized refresher courses on principal organ systems of the body. Patterned after three pilot courses held last year in Ponca City, Lawton and Muskogee, the programs will feature four hours of lecture and discussion, pleasantly divided by a social hour and dinner. Four instructional teams are now being selected by Hannas' committee for the eight regional meetings. Subjects selected for the teams are: "The Liver," "The Kidney," "The Colon," and "The Lung."

Meeting sites selected and the subjects to be presented are: Enid ("The Lung"); Bartlesville ("The Liver); Chickasha ("The Kidney"); Ardmore ("The Kidney"); Ada ("The Liver"); Fort Gibson ("The Colon"); Miami ("The Lung"); and Burns Flat ("The Colon.").

Physicians within a fifty mile radius of the meeting sites will receive invitations and official programs in advance of the meeting. Registration fee for the meetings, which includes the social hour and dinner, is $7.50.

"These regional courses are designed to offer subject matter of general appeal," Hannas said, "and we have tried to select meeting sites which will make the programs conveniently available to most physicians." □

Oklahoma City Clinical Society Will Meet October 23-25, 1961

Final plans have been drafted for the Oklahoma City Clinical Society's thirty-first annual three-day fall meeting. Activities will begin October 23, 1961 at the Sheraton-Oklahoma Hotel.

The postgraduate teaching program will include discussions and lectures in diversified fields of medicine by fifteen noted physicians. Specialty lectures, a clinical pathologic conference, daily roundtable luncheon question and answer sessions will be in addition to the general assemblies.

Featured Speaker

The Oklahoma County Medical Society will host guest lecturers and out-of-town physicians at a banquet on Monday evening, October 23. Principal speaker for the evening will be James Q. du Pont, nationally known lecturer and administrative assistant of the E. I. du Pont de Nemours & Company, Wilmington, Delaware. Topic for Mr. du Pont's talk will be "Pattern for Success."

A social hour on Tuesday evening will be followed by eight specialty group dinners, honoring the guest speakers. Members and associate members may attend the group dinner of their choice.

Each year, the Oklahoma City Chamber of Commerce honors the Oklahoma City Clinical Society and its visiting members with a dinner-dance. This will be held on Wednesday evening in the Persian Room of the Skirvin Tower Hotel.

Guest Speakers

Appearing before the conference this year will be: Ivan D. Baronofsky, M.D., Clinical Professor of Surgery, University of Southern California School of Medicine, San Diego; Edwin W. Cocke, Jr., M.D., Assistant Professor of Otolaryngology, University of Tennessee College of Medicine, Memphis; Bentley P. Colcock, M.D., member of the Surgical Staff, Lahey Clinic, Boston, Massachusetts; Charles W. Daeschner, Jr., M.D., Professor and Chairman of the Department of Pediatrics, University of Texas Medical Branch, Galveston; Douglas M. Haynes, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, University of Louisville School of Medicine, Louisville, Kentucky;

Walter M. Kirkendall, M.D., Director of the Cardiovascular Research Laboratories, State University of Iowa Hospitals, Iowa City, Iowa; Charles P. Larson, M.D., Assistant Clinical Professor of Pathology, University of Washington Medical School, Tacoma, Washington; E. Perry McCullagh, M.D., Head of the Department of Endocrinology and Metabolism, Cleveland Clinic Foundation, Cleveland, Ohio; Donn G. Mosser, M.D., Professor of Radiation Therapy, University of Minnesota Medical School, Minneapolis;

Robert E. L. Nesbitt, Jr., M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, Albany Medical College of Union University, Albany, New York; Edward W. D. Norton, M.D., Professor and Chairman of the Department of Ophthalmology, University of Miami School of Medicine, Miami, Florida; Donald L. Rose, M.D., Professor and Chairman of the Department of Physical Medicine and Rehabilitation, University of Kansas School of Medicine, Kansas City;

Ian M. Thompson, M.D., Professor and Chairman of the Department of Urology, University of Missouri School of Medicine, Columbia, Missouri; Charles E. Wells, M.D., Associate Professor of Medicine (Neurology) and Chairman of the Division of Neurology, Vanderbilt University School of Medicine, Nashville, Tennessee; and Jack K. Wickstrom, M.D., Professor and Chairman of the Division of Orthopedic Surgery, Tulane University School of Medicine, New Orleans, Louisiana.

The three-day conference is acceptable for 18 hours of Category 1 Credit by the American Academy of General Practice. □

Forensic Meeting Lays Groundwork for Medical Examiner Law

All Oklahoma physicians are encouraged to attend an October 22nd forensic medicine seminar, to hear Seattle pathologist Charles P. Larson, M.D., discuss the proper method of conducting a medical-legal examination. Sponsored by the Oklahoma Association of Pathologists, the meeting is designed as an introductory course for physicians interested in becoming county medical examiners, as provided by Oklahoma's new Medical Examiner Act.

The two hour session will be held at 3:00 p.m. Sunday, the day preceding the opening of the Oklahoma City Clinical Society Meeting, in the main auditorium of the O.U. School of Medicine. Raymond F. Hain, M.D., Oklahoma City pathologist, is in charge of planning.

Role of Examiners

The Oklahoma Medical Examiner Act, long-sought by organized medicine and law enforcement officials, becomes effective January 2, 1962. Commonly called the "unexplained death bill," the act is designed to supplant the present antiquated coroner's court with a more scientifically-sound system of state and county medical examiners.

A state medical examiner, operating under the direction of a Board of Unexplained Deaths, will be responsible for the medical investigation of: violent deaths; sudden deaths of apparently healthy persons, when the cause is not readily recognizable; deaths under suspicious, unusual or unnatural circumstances; and deaths from diseases which menace public health. To accomplish this mission, the state examiner will appoint a county medical examiner for each county of the state.

The county examiner, upon being notified, will immediately investigate such deaths and report his findings to the state examiner. Autopsies may be ordered when warranted, subject to the receipt of necessary authorization from either next-of-kin, the county attorney, or the District or County Courts.



CHARLES P. LARSON, M.D.

"Now that we have been successful in obtaining legislation for the handling of unexplained deaths," Doctor Hain said, "the medical profession must prepare itself to properly carry out the important function of medical investigation. The October 22nd meeting will give us an opportunity to hear from a national expert in medical-legal problems and, at the same time, lay the groundwork for effective implementation of the Medical Examiner Act. I hope every county medical society will have a representative present at the meeting." □

Doctor Diplomats

Five physicians from Tulsa, Oklahoma, members of the First Presbyterian Church of Tulsa, are giving up their practices for six-week periods to serve voluntarily at the Miraj Medical Center in Miraj, India.

Doctor C. S. Lewis, one of these five Tulsa physicians, recently reported to the AMA on the progress of the project labeled "Doctors in Asia." Other physician-participants are: George R. Krietmeyer, M.D., William C. Pratt, M.D., Maxwell A. Johnson, M.D., and Dale E. Newman, M.D.

The first of the group of volunteer physicians; Doctor Lewis flew to Miraj in mid-August. He will return at the end of September and the next doctor will make the trip. In all, the five physicians will donate a total of thirty weeks to the program. The project is endorsed by the Tulsa County Medical Society. Funds for medical equipment, transportation and other expenses were raised through church and public contributions.

Other groups of American physicians are also becoming interested in the possibility of initiating a similar venture in their own communities. For example, several doctors met with Doctor Lewis during his AMA visit to discuss the feasibility of adopting an overseas program which would provide medical care to another area of the world equally in need of such assistance.

Still another example of American physicians demonstrating their interest and willingness to serve in foreign mission fields on a temporary basis is shown by the large number of doctors who have written to the AMA Department of International Health in the last few months to inquire about such service. This new Department administers a program approved last June by the AMA House of Delegates whereby members of the AMA may volunteer for service in the foreign mission fields on a temporary basis when emergencies arise. Cooperating with AMA in this program are missionary agencies representing every denomination sponsoring American medical missionaries.

Physicians interested in volunteering for such service are asked to write directly to the AMA Department of International Health, 535 N. Dearborn Street, Chicago 10, Illinois. □

Cost of Care Booklets

County medical societies may order copies of the AMA's new booklet "The Cost of Medical Care" by writing to the OSMA Executive Office. Two copies of the publication are available for each county society member. The 15-page booklet graphically presents a statistical analysis of the health care dollar as compared to other costs of living. □

OU Medical School Enrolls 104 Students

A new first year class of 104 men and women started studies September 11 at the University of Oklahoma School of Medicine.

The new medical students:

Donald Claude Bailey, Stroud; Charles Walker Barbee, Antlers; Jonne Louis Barney and Tom H. Garrett, Anadarko; Shelba Jean Bethyl, Gans; Curtis Owen Bohlman and Arnold Earldo Branch, Watonga; James Donald Brashear, Stilwell; Stanley Fred Brunn, Brooklyn, New York; Bob Lee Bruton, Hartshorne;

Jerome Lloyd Borochoff, Jeffrey Howard Cohenour, David V. Eakin, James Clifford Henry and Richard P. Tucker, all of Tulsa; Twilah Fox, Bixby; John B. Freidenberger and Paul Lewis Nave, Enid; Dale Ralph Butler and Lyle Benjamin Cartwright, Norman; Ronald Alvan Callicott, Joseph Laurent Krueger and Delmer Dee Raibourn, Lawton;

Robert Joe Capehart, Muskogee; Robert Paul Carter Jr., Tonkawa; Charles Franklin Coker and Jon Dalton Tillinghast, El Reno; Phil Douglas Craft, Hugo; Ronald I. Cramer, Elmwood; Aaron Cornwell Elliott, Vian; Charles Tandy Folsom, Marietta; Eldon Van Gibson, Tahlequah; Leslie Robin Gross, New York, New York;

Manuel Hensley, Bethany; Robert C. Hoffman, Newkirk; Martin R. Hullender, Frederick; Richard Lee Hunter, Spiro; Melvin Price Hutts, Vinita; Jimmie Keith Jackson, Healdton; Donald Franklin Johnson, Inola; Ray Monroe Johnson, James Franklin Todd and Ildiko Margit Sandford, Stillwater; Roy Dewitt King, Midwest City; Patrick David Lester, Broken Arrow; Larry Wayne Magnuson, Alva;

Donald Eugene McHard and Jon Thomas Willis, Blackwell; Thomas Richard Medlock, Fitzhugh; Don Wesley Meinders, Pauls Valley; James Earl Milton and Jack Irion Pickren, Shawnee; Burt Chesley Montague, Elk City; Kirk Thornton Mosley Jr., Noble; John Gail Henry Neely, Edmond; Thomas Clinton Neese, Seminole;

Robert Richard Pavlu, Waukomis; Dennis George Pennington, Midland, Texas; John Kendrick Pirtle, McAlester; Charles Robert Plank, Fairview; Kent Hardie Potts, Wellston; Phyllis Maria Pyrum, Durant; Gary Wayne Rahe, Crescent; A. J. Reed, Kiowa, Kansas; Jimmie Lee Reed, Nowata; Sam Ted Reyes, Wewoka;

Thomas Ryan Russell, Meeker; Mary Louise Saddoris and Gary L. Shepherd, Bartlesville; Harley Joe Scholz, Red Rock; Stanley Allen Skaer, Augusta, Kansas; Richard Beil Stice, Odessa, Texas; Garry Franklin Strebel, Okay; Leaford Thornbrough, Clinton; Mark Tong, Seoul, Korea; Carroll LeRoy Zahorsky, Carmen;

Robert Carlton Arnold, Vander Michael Barket, George Newton Barry, Charles V. Blair, John Russell Bozalis, Robert Wayne Carson, Jerry Alan Cook, Beverly Dale Dodson, Theodore Henry Fortman, Stephen Samuel Haas, Abbas Eqbal Kitabchi, Rex Roland Matthews, James Finley McMurray, Jr., Nicholaas Lingen Meiring, Donald Dee Mitchell, Germaine Louise Petty, Georgia Rae Prentice, Kenneth Gerald Presley, Frederick William Schacht, Jr., Teresa Marie Stacy, Nicholas James Stephanou, Rex E. Stockard, Donald Lee Tutt, Bruce McMillan Van Horn, James Edward Walraven, Marvin Weisbard, David Parker West, Harriet Joellen Wildman, all of Oklahoma City. □

District II Holds Annual Dinner Meeting

Fifty physicians and their wives from Trustee District II of the Oklahoma State Medical Association braved the torrential aftermath of Hurricane Carla to gather at the Cushing Country Club on September 12th for their annual district society dinner meeting. The traditional business-social event drew attendance from Payne, Pawnee, Kay, Noble and Osage county medical societies.

OSMA President Clinton Gallaher, M.D., Shawnee, was the principal speaker for the evening. Doctor Gallaher called attention to some of the broad, major projects facing organized medicine for the coming year, then focused the discussion on the "Five Point Program" he plans to carry out in addition to the regular projects. A medical law familiarization program for Oklahoma licensees, socio-economic indoctrination courses for new members, improved postgraduate education programs, medical career counseling at the highschool level, and financial assistance to medical students were named as "points" for association action.

In addition to Doctor and Mrs. Gallaher, other honored guests included: Mrs. W. Pat Fite, Sr., state auxiliary president, and Doctor Fite, Muskogee; and, Mrs. Milton Berg, auxiliary president-elect, and Doctor Berg, Tulsa.

George R. Smith, M.D., and Mrs. Clifford Bassett, both of Cushing, were in charge of local arrangements. Doctor Bassett presided during the dinner meeting.

Trustees for the district are G. B. Gathers, Jr., M.D., Stillwater, and A. M. Evans, M.D., Perry. □

After-Care Conference

The Oklahoma Association for Mental Health is sponsoring an After-Care Conference on Sunday, October 22nd. This conference will concern itself with follow-up care of patients discharged from our various mental institutions with particular emphasis on the role of the private physician in the community.

Doctor Dan Blain, Commissioner of Mental Health for the State of California, will be honored speaker at the panel discussion.

All physicians in the state are invited to be guests of the Association at 12 o'clock noon luncheon to be held at the 89ers Inn, 3300 North Lincoln, Oklahoma City. The conference will follow the luncheon. Physicians interested in attending the luncheon should contact Lester Hall, Executive Director, Oklahoma Association for Mental Health, 309 Municipal Auditorium, Oklahoma City 2, Oklahoma. □

Ciba Foundation Symposium on Congenital Malformations. Edited by G. E. W. Wolstenholme and C. M. O'Connor, pp. 320, Little, Brown and Company, Boston, 1960. Price $9.00.

This volume represents the proceedings of a symposium on congenital malformations held in London in January, 1960, under the sponsorship of the Ciba Foundation. Authorities from many different disciplines with a common interest in congenital malformations — genetics, biochemistry, pathology, anatomy, pediatrics, embryology, obstetrics, epidemiology— met to review various aspects of this major health problem and to bridge the gap between their respective fields. The value of the publication is enhanced by the printing of the discussion of each presentation, which is customary with Ciba Symposia.

A significant portion of the monograph is devoted to teratogens—tumor-inhibiting chemicals, actinonycin D. pteroglutamic acid deficiency, and environmental factors—in the production of congenital malformations in experimental animals. Woollam and Millen report their interesting experiments on the modification by cortisone, insulin and methylthiouracil of the known teratogenic effects of irradiation and hypervitaminosis A. A valuable contribution is the observations of McKeown and Record of Birmingham on various aspects of congenital malformations in a population observed for five years after birth. Of particular interest are the findings on the life expectancy of patients with various types of congenital malformations and on the incidence of association of various types of anomalies.

Penrose provides a very readable review of certain aspects of the genetic causes of malformations, which also serves to point up the large gaps in our present-day knowledge of this aspect of teratology. Ford reviews some of the more fundamental concepts of chromosomal abnormalities as they relate to congenital malformations. There is also a chapter on congenital runting and the possible implications of placental fusion and ovarian position in the production of human counterparts of this syndrome. Giroud reviews his work on the morphogenesis of anencephaly. The association of various maternal conditions, including "prediabetes," hypothyroidism and hydramnious, with various types of congenital malformations is liberally reviewed. The final chapter is a reproduction of the general discussion participated in by most of the symposium participants.

The binding, printing and photographic reproductions are of high quality. This monograph in book form is a valuable reference and provides an opportunity for those interested in congenital malformations to have at their disposal reviews of recent work of high quality on this subject.—*Harris D. Riley, Jr., M.D.* □

Ciba Foundation Colloquia on Endocrinology, Vol. XIII; "Human Pituitary Hormones." Edited by G. E. W. Wolstenholme and Cecilia M. O'Connor, pp. 336, Little, Brown and Company, Boston, 1960.

The editors of this book and the Ciba Foundation are to be congratulated on their accomplishment in bringing together some of the important up-to-date information covering the human pituitary hormones. The book is composed of a collection of papers given by a group of internationally famous investigators who were brought together to honor Professor B. A. Houssay. The first section deals with some interesting new radiological information covering the anatomy of the human pituitary gland which will undoubtedly prove to be of clinical importance. The remainder of the book deals with the various hormones of the pituitary gland; some of the procedures for preparation of these hormonal products and the chemical and biologic properties of these products are considered. The best part of the book, which consists of approximately one-half of the total volume, deals with growth hormone; the papers dealing with the metabolic actions of this hormone and methods of assaying this hormone in man are especially interesting. The next largest section considers the gonadotropins; some important advances are being made in the differential assay of follicle-stimulating hormone and interstitial-cell stimulating hormone which may be of importance in the understanding of the physiologic role of these hormones. ACTH and melanocyte-stimulating hormone have been isolated from the human pituitary gland; it has been shown that these two have similar aminoacid sequences in their molecular make-up. The final chapter is devoted to the assay of thyrotropic hormone in human blood; the data is interesting and promises to be of clinical significance. In conclusion it can be stated that this is a book which summarizes very well the latest information concerning the human pituitary hormones. It is strongly recommended for those interested in endocrinology. — *Doman K. Keele, M.D.* □

Blood Diseases of Infancy and Childhood. Carl H. Smith, M.D., the C. V. Mosby Company, 1960, pp. 572. Price $17.00.

This book is a well organized textbook of those hematologic disorders of infancy and childhood seen by either the general practitioner, pediatrician or hematologist. The problems are presented against a background of normal growth and development. The general considerations of normal myelopoiesis are well presented and attention is given to those disorders of infants caused by or intimately related to maternal-fetal abnormalities. Specific types of anemias are presented in a methodical and orderly manner. Cur-

rent concepts of the pathogenesis of each type of anemia are discussed fully. The clinical manifestations and pertinent laboratory procedures necessary for the diagnosis of these disorders are included. The treatment of each anemia is presented in an intelligible and rational way. If specific treatment is available, the preparations, mode of administration and expectations are mentioned. If supportive therapy is all that is available, the acceptable management is outlined. Chapters on the hemoglobiopathies and clotting disorders are included in the light of present knowledge. Bibliographical information is very good. I would highly recommend this book to all interested in pediatrics and hematology.—*Ted Clemens, Jr., M.D.* □

MISCELLANEOUS ADVERTISEMENTS

PHYSICIAN doing internal medicine desires to dispose of practice. Office located in prominent medical building in town of over 100,000 population in Oklahoma. Contact Key L, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

RECENTLY COMPLETED, and now leasing, beautiful new Midwest City medical building. Only one suite left. Contact Key O, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City.

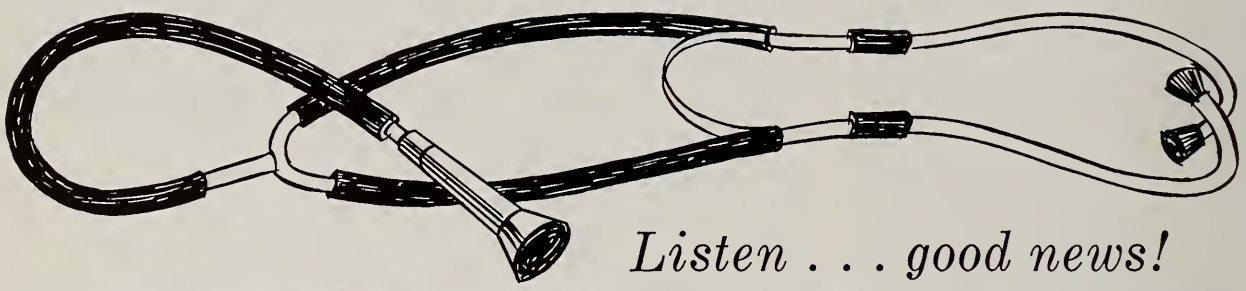
SOUTHERN OKLAHOMA group desires young general practitioner for association, leading to partnership. Write Key B, The Journal, P.O. Box 9696, Oklahoma City, Oklahoma.

FOR SALE at bargain prices: lensometer (A.O.), projector (B & L), a opthalmoscopes (A.O.), sterilizer, perimeter, spot lamp, cuspidor, treatment cabinet, treatment table and treatment chair. Contact Mrs. J. J. McDonald, 4734 Dartmouth, Bartlesville, Oklahoma.

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IMPORTANT DATES

State Board Meeting and Fall Conference, October 23, 1961; Oklahoma City Clinical Society, October 23-25, 1961; Southern Medical, Dallas, November 6-9, 1961.

IMPORTANT DATA

As Strunk's little black book is to the college freshman, so the *Bulletin* proves indispensable in Auxiliary work. (Plug: If you have no local chairman, send your $1.00 to our State Bulletin Chairman, Mrs. William K. Walker, 401 North 6th, Marlow, asking to receive the September issue.)

When we champion our own publication from National, it is not through sense of duty or of meeting quota competition. The *Bulletin* stands on its own merit. It seems imperative that officers and chairmen of each county auxiliary consider it essential; on the other had, every interested member misses much if she does not read it.

Members often discuss the value of good, strong, public relations, community services, and civic projects. More often than not, we all agree not only on the importance of these three, but also on their over-lapping character. For example, any worthwhile community service or civic project can be considered good public relations. (Think how beneficial or advantageous they will be if the poll-takers ever get around to the image of the doctor's wife or family.)

Seriously, we can often read a report such as the one on page 35 of the September *Bulletin*. Some auxiliaries may undertake such a project alone; others might apply this principle of over-lapping mentioned above and work with church organizations to achieve the goal. We think the latter preferable.

The recommendation is as follows: Over 500 physicians are serving as medical missionaries, many in remote and primitive areas. The average medical library is less than twelve books; the average salary is $125 a month. The executive director of the Christian Medical Association has requested auxiliaries assist him in procuring books for reference libraries. As we said, your auxiliary could collect any medical books or journals, as new as possible. Then, working with various church groups in your community, you could pack and possibly share the expense of shipping to: Christian Medical Society, 1122 Westgate, Oak Park, Illinois. They will distribute and pay for overseas shipment.

We also stress constantly the inter-play of public relations in regard to legislation. The need for strength, coupled with knowledge, has never before been more obvious. The Convention address typifies this; it is fully reported in the *Bulletin*. It was delivered by Mrs. Louise Bushnell, Director of the Women's Department of the National Association of Manufacturers, and is required reading for all members.

Mrs. Bushnell has her counterpart in leaders in the Women's Organization of the Farm Bureau and many active women in your community. We listed a few of these organizations in the September *Journal*. Become acquainted and interested in these organizations. Of particular timeliness is this statement by Mrs. Bushnell: "There is no government monopoly on virtue. Because this is so, virtue and right are not to be gained by surrendering more of our resources and more of our freedoms to government in the hope that America will thereby be improved." □

OSMA JOURNAL / *the last word*

Reacting to the AMA's recent recognition of "scientific" osteopaths (to the exclusion of non-scientific and manipulators), the American Osteopathic Association has raised its dues $25 per year and assessed its 10,000 members $75 each. Result: A $1 million war chest to fight the AMA, who they say is "seeking to destroy the osteopathic profession by dividing its ranks."

Be prepared for a dues increase yourself, but for what seems to be a more noble purpose than the osteopaths'. AMA is jumping its annual rate $10 on January 1, 1962, to create a financial assistance fund for medical students and to improve its public relations program. On the same date, the OSMA House of Delegates has authorized a $5 increase in annual state dues, again to ease the financial burden of medical education, but, in this case, earmarked for scholarships, grants and loans to O.U. medical students.

The East Central District Medical Society scored a public relations coup when it announced that local physicians would provide complimentary health examinations for all Muskogee school children who will be participating in the national Physical Fitness Program, headed by O.U. football coach Bud Wilkinson. Muskogee was selected as the pilot area for the program, a program in which President Kennedy is especially interested.

Have questions about medicolegal forms? The AMA Law Department has issued a revised and expanded edition of "Medicolegal Forms With Legal Analysis." The booklet contains samples of 47 forms or form letters to be used by physicians or hospitals. Physicians may get one copy free, and hospitals may obtain them at $1 each, by writing to Bernard Hirsh, Director of Law Department, AMA, 535 N. Dearborn, Chicago 10, Illinois.

Plan to incorporate under Oklahoma's new Professional Corporation Act? It's a real boon to some physicians, but may work to the disadvantage of others. Take heed of the OSMA legal counsel's advice, as outlined in the September issue of *The Journal.*

Cost of Care Booklets are available from OSMA Executive Office. They're an interesting, pictorial analysis of the cost of health care, as related to other important costs of living. Two copies are on hand for each physician.

The 87th Congress adjourned September 27, after a record peace time spending spree of $95 billion. More than 500 of the 14,000 bills introduced were of interest to medicine. The AMA testified on nine bills, favoring three, opposing four and remaining neutral on two.

Blue Cross-Blue Shield has written the lion's share of coverage under the Federal Employees Health Benefits Act. Competing with 38 other carriers, Blue Shield has enrolled one million of the 2½ million federal employees eligible to receive government help with their health insurance.

Medical World News reports (September 15th issue) that "conservative" Social Security Administration figures indicate 40 per cent of the nation's 201,000 physicians are fully covered under social security, despite official opposition of organized medicine.

MEETINGS

October 22	Board of Trustees, Oklahoma State Medical Association, Oklahoma City
October 23-25	Oklahoma City Clinical Society, Oklahoma City
November 8	Wednesday Short Course (Surgery) University of Oklahoma School of Medicine, Oklahoma City
November 21	OSMA Regional Postgraduate Course, Bartlesville
November 26-30	AMA Clinical Meeting, Denver.
December 2	ACS Annual Cancer Seminar, Oklahoma City
May 5-7	OSMA Annual Meeting, Oklahoma City

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..... a memo from and

OCTOBER, 1961

A STRANGE PARADOX

"It's hell if I do.....and hell if I don't", said this physician as we drank coffee in the hospital cafeteria. "You want me to keep 'em out of here, and the administrator wants me to fill the place up! I wish somebody would make up his mind, Carl."
Well, I knew how he felt, and he's not the first physician to express the thought.... even though he said it more colorfully than most. Naturally, the whole subject of prepayment, public pressures and the management of cases seems to be a doctor's dilemma. Maybe it's because we all tend to over-simplify issues and decisions. However, with that danger clearly in mind, I'd like to take a "swinging try" at clarifying the problem and delineating responsibilities.

To reduce Blue Cross' financial fate to its basic tenets, it depends on three controlling factors: (1) the *number* of members hospitalized, (2) the *length* of time they stay, and (3) the *cost* of care at that hospital.

No one has ever denied that physicians have at least *authoritative control* over *who* gets into the hospital and *how long* they stay. Nor has anyone ever denied the presence of all kinds of patient, family and socio-economic pressures on the physician to influence his decisions. However, his authority is unquestioned, and therein lies the crux of prepayment's troubles.

The rate-of-admission is so important because nothing happens to Blue Cross (except for small out-patient benefits) *until* a member is admitted to a hospital. Neither the length-of-stay nor the cost of the care matters until there is an admission. So let's just take this one factor and look at it closely.

This statistical factor is stated in terms of Blue Cross "admissions per thousand members", thus eliminating the influence of fluctuating total memberships in an area. Briefly, it's this:

	1956	*1960*
All (86) Blue Cross Plans	135 per thousand	139 per thousand
Oklahoma Blue Cross	147 per thousand	161 per thousand

Beside the obvious greater *percentage in rise* in Oklahoma, it's also quite evident that we're running almost 16% higher than the national average. Why?

In searching for some reasons for Oklahoma's sudden jump in admissions, the *availability* of hospital beds in the state is certainly a statistic to be scrutinized. Back in 1956, our 151 Blue Cross Member Hospitals in Oklahoma had 7,102 beds available. Last year, our 153 hospitals had 13,477 beds! The small rise in total hospitals is due to the fact that privately-owned hospitals are being replaced by community-owned ones. The large gain in beds is due to wing-additions to existing hospitals and the completion of some rather large new ones, i.e. Baptist Memorial, Saint Francis. The medical and lay population have remained practically static in that same period of time; so the theorem that a "vacuum tends to fill itself" is not inappropriately applied to additional hospital beds. Of course, this trend, projected to the coming years, makes it obvious that prepayment *must* inevitably become more and more expensive to support the increasing use of hospital beds. This is not to say that adequate hospital facilities should decrease or not be made available to the people of Oklahoma. Apparently, they are still on the increase, and with the full awareness of the general public. For instance, plans have been made for at least one hospital in each county. Needless to say, federal subsidies have had a great influence on this rapid building program.

The *presence* of a hospital bed is at the base of a "vicious circle" of hospital economics. Its original and complete cost-to-build today approaches $22,000 each. Its average operational cost currently in Oklahoma is $26.32 *per day*. Thus, once beds are built, their *occupancy* thereafter has a tremendous effect on their cost to maintain. When the occupancy of a hospital is low, the hospital's stand-by cost of daily operation generally remains the same. However, the income from patients drops, and each bed's *actual* cost increases. When a hospital's occupancy runs 80-86%, its actual cost per bed is at its most realistic level.

Thus, there emerges the paradox that a nearly-full hospital runs at an efficient cost of operation, and a nearly empty one costs more than necessary. So a high admission rate seems desirable, doesn't it? Well, it certainly is, IF the *number* of available beds remains *static*. But, alas, the number still increases.

Do physicians have any influence in convincing communities of their need of hospital facilities? Do they have any influence over the facilities, staff, and equipment in hospitals? Do the locations of physicians throughout the state have any correlation with hospital construction? The answers to these questions are obvious, but their *importance* is all too often overlooked in the total picture. The role of every physician in *all* of medical economics goes far beyond individual "fees for services" to the public. It goes beyond his office, his town, and his state.

But back to my coffee-drinking friend in the hospital cafeteria. "I see what you mean, Carl, but I'll never convince my colleagues....." To that I reply "Thanks for listening. If I've *really* made you think, you'll help me with the others."

We've analyzed only one facet of a problem this time: the rate of admission. This seemed the logical place to start the analysis. The figures I've quoted are *total* in-patient admissions. There are sub-surface details of those figures, such as: 7% of our Oklahoma members were hospitalized outside the state, the 20% higher rate of admission for Non-Group members versus Employed Group members, and how the differential is built into the dues structure. I'll be glad to furnish those details to anyone interested or devote a future article to them. Statistics are tricky to write about.....too few are dangerous.....too many are either confusing or boring.

In our next article we'll analyze the *types of admissions by diagnoses*. There are some interesting trends developing in that respect.

Sincerely,

Carl Bebla

The JOURNAL of the Oklahoma State Medical Association

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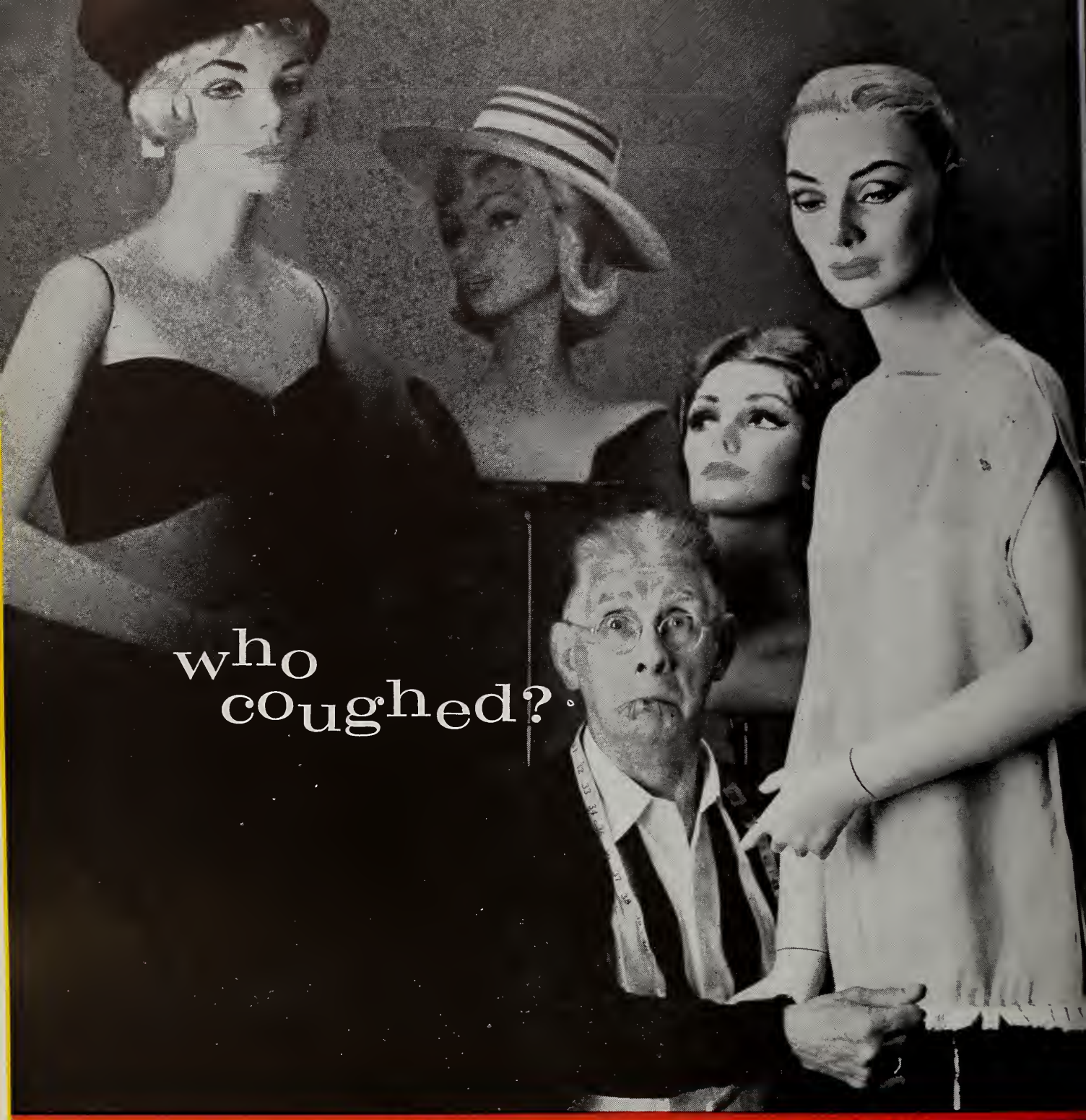
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Poison Information Center

1956-1961

LIKE Professor Higgins of *Pygmalion* and *My Fair Lady* fame, we have grown accustomed to her face. It will not be easy to get along without her. Oklahoma's Poison Information Center was one of the first to be established and we have heard of no other that quit.

Doctor Shoemaker, in semi-retirement from his departmental duties, devoted much time, effort and thought to the center. Under him, it developed into what we considered an indespensable facility. Perhaps his love of the project, and his intense satisfaction in the service the center was able to give, lead us to take too much for granted. Since his death in November, 1960, its continued function has depended on the voluntary efforts of Doctors John H. Gogerty, Richard W. Payne, H. V. L. Sapper, Robert F. Redmond, John A. Blaschke, Dave C. Mock, Marilyn Porter, Jacob L. Kay and Paul W. Smith. These people have done fine unselfish work, but at best it has been a make-shift affair, and they would be the first to say, not a satisfactory one. Effective operation of a Poison Information Center requires the presence of a full-time toxicologist, a suitably equipped laboratory and technical and secretarial help. Money for this is not available and our center was closed.

The University Medical Center offers many fine services to the physicians and people of Oklahoma. No service, however, stands out so clearly as did the center with a helping hand for any and everybody in need of its particular brand of help and with no requirement or qualification except the need. Every physician, every mother, every school nurse, every public health nurse, every office nurse, every hospital emergency room felt secure in the ability to obtain help when the emergency of poisoning arose. It was a fine and generous public service supplied by the Medical Center. It was a service not obtainable elsewhere within the state. The decision to cease operations must have been a difficult one for the Medical Center and must have been made only after exploring every possible means of keeping it in operation.

If a toxicologist is required for the successful and effective operation of a Poison Information Center, then every doctor's office and every hospital emergency room, which now become little such centers, are hopelessly inadequate unless the doctor involved happens to have a special interest in this field. This, few of them do. The rapid introduction of new drugs, new cleaning solutions, new insecticides, new household chemicals, new chemicals for doing things to women's hair, new bleaches and new pipe unstoppers makes text books on the subject obsolete by the time they are published.

A clue to the problem for each of us may be gained from the last nine months experience of the center. There were 857 calls; 417 from doctors, 87 from hospitals and 353 from patients. They referred, for the most part, to the following: internal medicine (176), household preparations (156), pesticides (148), cosmetics (72), plants and seeds (54), external medicine (41), petroleum products (37), paint and varnishes (33), metals (15).

A committee of the state association is looking into the matter, but in the meanwhile we will have to do the best we can, and try to remember that toad stools can't be washed out through a tube but have to be vomited. □

Since the preparation of this editorial, the Health Department has been exploring means of maintaining the Poison Information Center through its own and available consulting facilities. As we go to press this appears promising.

Point One

The Board of Trustees met in the headquarter offices of the Oklahoma State Medical Association on October 22nd. The various items of business are reported in this *Journal* but we wish by this means to call attention to the progress and further planning for the Point One program. (OSMA'S 5-Point Program, July *Journal.*)

Doctor R. R. Hannas of Sentinel reported as the chairman of the Council on Professional Education and for the Medical School Liaison Committee (Doctor G. E. Stanbro, Chairman). It was explained that the intent is to interest top high school students in pursuing medicine as a career and to inform them of admission policy and procedure in the University of Oklahoma School of Medicine. It is proposed that a part of this program shall be accomplished through the use of physician counselors at the high school level. All Trustees were requested to appoint such counselors, preferably at least one for each high school in the district. The report of these appointments should be in the Executive Office not later than December 1, 1961. Counselors so appointed will be supplied with ample quantities of informative material.



Members of the Board of Trustees are urged to make their appointments at the earliest convenience and doctors so appointed shall be encouraged to publicize the fact that this service is available. Regardless of appointments as such, it is felt that every member of the Oklahoma State Medical Association should be able and willing to participate in this program as the occasion may arise. Your cooperation is earnestly solicited. □

Clinton Gallaher M. D.
President

OSMA JOURNAL/scientific

Organic Behavior Disorders in Children*

PAUL C. BENTON, M.D.

Our experience indicates that the majority of parents whose children have school problems of any kind, first seek help from the family physician. Be prepared.

MANY CHILDREN referred for psychiatric care because of behavior disorders, neurotic patterns, or as disciplinary problems, have underlying mild involvement of the central nervous system. These children are commonly referred to as "Brain-damaged" or "Brain-injured." The central nervous system involvement may be due to developmental factors, but is more commonly thought to be the result of insults to the developing brain during the prenatal period, the perinatal period, or the post-natal period. The damage may be caused by infectious processes, toxic factors, anoxia, or actual physical trauma during any one of these periods. New medical advances save the lives of countless children. Many of these children, before the age of antibiotics or other life saving techniques, would have failed to obtain viability or died from diseases involving the central nervous system, such as meningitis or encephalitis. Some of those saved bear the marks of these ordeals in the form of cerebral dysfunction.

In the *Standard Nomenclature of Diseases and Operations,* Diseases of the Psychobiologic Unit, under Chronic Brain Disorders, it states: "The chronic organic brain syndromes result from relatively permanent, more or less irreversible, diffuse impairment of cerebral tissue function. While the underlying pathologic process may partially subside, or respond to specific treatment, there remains always a certain irreducible minimum of brain tissue destruction which cannot be reversed, even though the loss of function may be almost imperceptible clinically. The chronic brain syndrome may become milder, vary in degree, or process, but some disturbance of memory, judgment, orientation, comprehension and affect persists permanently." These symptoms affect these children in such a manner that they are frequently misunderstood and mislabeled problem children. One cannot deny the existence of the psychiatric problems, but it is important to determine whether their behavior is of a primary functional nature or is secondary to cerebral tissue dysfunction. The importance of differentiating the primary functional behavior problems from the

*Presented at the 55th Annual Meeting of the Oklahoma State Medical Association, May 7-9, 1961.

secondary organic behavior disorder lies in the fact that the approach to treatment in the two disorders varies greatly, and the prognosis may be more optimistic in the organic disorder than in the functional case. In both instances the problems are primarily around social adjustment, but there is generally a better prognosis for children whose psychiatric problems are secondary to organic factors than in those children whose problems are due to the emotional factors alone. Therefore, it is essential to determine the presence or absence of organic factors in children with behavior problems by a thorough evaluation.

As in any medical condition, a complete history is important. The original damage may have occurred at any time after conception, and a careful prenatal history should be taken, paying particular attention to maternal virus infections, exposure to radiation, anesthetics, bleeding or spotting, particularly during the first trimester, toxemias of pregnancy, maternal metabolic diseases, such as diabetes or thyroid conditions, and many other conditions that may affect the developing central nervous system of the embryo or fetus. It has been shown that even dietary deficiencies may have a profound influence. This is of particular importance these days when most women are trying to obtain the measurements of movie queens by diet fads. Prematurity, with its frequent complications, is one of the major causes of cerebral tissue damage. Although long, difficult labors and abnormal presentations may be contributing factors, precipitous and even normal vertex deliveries may be accompanied by symptomless cerebral hemorrhages. The water hammer effects of sudden differences between intrauterine pressure and atmospheric pressure may cause perivascular hemorrhages. Studies have shown that a large percentage of newborns show blood in the spinal fluid.

Anoxia and hypoxia also are common causes of damage to cerebral tissue. The oxygen demands of the brain are notoriously high, and there are many factors during pregnancy or the delivery process that may cause marked oxygen deprivation with resultant permanent after effects.

A careful inquiry into the various childhood illnesses and injuries is also important in a complete history. It is not uncommon for encephalitis to follow or complicate measles, mumps, whooping cough and other childhood diseases. It is the impression of our clinic that earlier brain insults predispose many of these children to such complications.

As the type of child I am discussing generally does not have obvious physical disabilities and is not intellectually retarded, the presenting complaint is usually that he is a naughty or difficult child who is quite a nuisance at home, in the classroom, and in the neighborhood. Characteristically, these children have certain clinical manifestations which taken individually have little significance. However, a total picture of hyperactivity out of proportion to age group, behavior that is poorly integrated, variable and often inco-ordinated, distractibility, poor concentration, disinhibition, perceptual and conceptual difficulties, perseveration and often difficulties with fine muscle co-ordination, especially activities requiring bimanual actions, should make one consider central nervous system dysfunction as an underlying basis of the child's difficulties.

Let us review these symptoms individually. These general behavioral characteristics are of diagnostic value only when recognized as a symptom complex; only significant when considered as a cluster of manifestations, of which no individual symptom is necessarily of prime importance.

1. *Hyperactivity—constantly in motion*: This may be purposeful or without purpose.

Paul C. Benton, M.D., who graduated from the University of Minnesota School of Medicine in 1936, limits his practice to his specialty, child psychiatry. He is Associate Professor in Clinical Psychiatry at the University of Oklahoma School of Medicine and instructor in the Department of Psychology at the University of Tulsa.

Doctor Benton is a Fellow in the American Psychiatric Association, the Academy of Psychosomatic Medicine and the Orthopsychiatric Association and a member of the American Association of Psychiatric Clinics for Children.

In these children the cortex is flooded by streams of unmodulated impulses coming in through sensory receptors, which cannot be adequately assimilated. This may be due to imperceptible injury to and subsequent dysfuntion of the diencephalon which fails to adequately filter out stimuli from sensory and visceral receptors.

2. *Poorly integrated, variable and in-co-ordinated behavior*: These children are often considered lazy and not trying. Some days they do well, other days poorly. They may have trouble riding a tricycle or bicycle, tying their shoes, buttoning their clothes, skipping, jumping rope, playing jacks, etc. A wide spread of abilities usually shows up in psychologic tests and may be one of the causes of school problems.

3. *Distractible*: They have difficulty concentrating on any one activity. They cannot separate the important from the unimportant so all impulses get equal valence.

4. *Perseveration*: To persevere is an admirable quality in which one pursues a course of action until the goal is achieved. In perseveration, the children carry the activity beyond their goal. This is more apt to occur when they are excited or under pressure. They repeat the same action over and over, ask the same questions, etc.

5. *Perceptual difficulties*: Perception is a process of the senses and occurs when an object is seen, a sound heard, or something is touched, tasted, or smelled, and there is some awareness of the experience.

Children with central nervous system disorders generally have trouble in co-ordinating the parts into wholes and cannot grasp a scene or situation in its entirety. They may highlight irrelevant details and have distorted versions of perceived objects. They have difficulty in eye-hand co-ordination and it shows up in their reproduction of drawings, in writing, in organization of paper work, reversals of letters, etc.

6. *Conception*: Perception is based on sensory experiences and conception is the resulting intellectual or thinking process—putting things together into a meaningful whole. There is also conception when ideas or memories come to the mind. These children have distorted perception and thus distorted concepts with resultant confusion, particularly in the relationship of time and space and ability to judge distance.

7. *Disinhibition*: These children are generally uninhibited and do not conform to an acceptable pattern of behavior in actions or conversation. Judgment is impaired and controls are inadequate. They have more difficulty than normal children in acquiring conscious control over their impulses. Sometimes when severely frustrated they lose complete control and develop violent tantrums.

All of these factors cause these children to have severe emotional problems due to their difficulty in interpreting and coping with their environment. This results in a great deal of anxiety and adds fuel to the fire. These children seem impulsive, seem unable to tolerate any delay in the gratification of their needs, are irritable, explosive, have a low frustration tolerance, and demand but cannot cope with close personal contacts. Their behavior is generally very immature. "He is different" exclaim his parents and teachers.

Most mothers have a deep concern about their worth and adequacy as women, wives, and especially mothers. A child, behaving as above, seems to offer clear proof of the mother's unfitness, leading to further tension in the mother and increasingly frantic efforts to mold the child into more acceptable patterns of behavior. In the hyperkinetic infant, a normal amount of mothering may be totally inadequate. When this fails, the development of unconscious hostility towards the child, which he returns in kind, may set off a train of severe emotional disturbances. Later in the child's life, he has difficulty in fitting into any scheme of family activity and he is further rejected.

Needless to say, when he reaches the crowded classrooms of today the teacher generally becomes hostile toward the child who, despite adequate intelligence, cannot sit still, cannot keep his mind on his work, hardly ever finishes an assigned task, has messy and poorly organized paper work, cannot grasp abstract ideas and therefore has reading and arithmetic learning disabilities, and in general is a distracting and disorganizing influence in any group situation.

The net result of all this is extreme unhappiness, a disturbed self-image and generally acting out behavior that brings him

to the attention of the physician or psychiatric clinic.

If these children are seen early enough and a diagnosis of "Chronic Brain Syndrome with an Overlay of Emotional Problems" is established and proper treatment instituted, the ultimate prognosis is generally favorable in those children with average or above average intellectual potentials.

Diagnosis is often difficult to establish as the general physical examination does not reveal specific abnormalities. Even a careful neurologic evaluation may fall within normal limits. However, one has to remember that the neurologic examination is a crude evaluation of the functioning of the central nervous system through presumptive and indirect means. It is particularly difficult to do a neurologic examination on a child. Although positive evidence of brain damage is helpful, a negative neurologic examination does not rule out mild diffuse abnormalities of the central nervous system.

The electroencephalogram is often helpful as a diagnostic aid. Here again, a normal E.E.G does not necessarily rule out pathology of the central nervous system. However, cerebral dysrhythmias are fairly common in this disorder.

Psychologic tests are frequently very helpful as they bring out the wide variations in ability, the perceptual and conceptual distortions and impaired judgment of these children.

No one test gives positive evidence. It is only by considering the total psychobiologic unit that the diagnosis can be established. The general behavior is perhaps the prime factor in establishing the diagnosis.

The child with an organically based behavior disorder is operating under a handicap, but this can be minimized. As maturation proceeds there seems to be a leveling-off process as the cortex develops and takes over more control of the diencephalon. The hyperkinetic child may become a rather placid adult.

There are several types of medications that seem to reduce the flood of impulses to the cortex. The amphetamines, both dexedrine and benzedrine, have been known to be beneficial for many years. More recently the phenothiazines and other tranquilizing drugs have proven helpful. New drugs are being explored constantly and there is considerable possibility that research will see tremendous changes in our treatment of this syndrome.

Medication alone is not sufficient to carry these hyperkinetic children through their stormy childhood. The course of their adjustment depends upon the acceptance and support they receive at home, in school and in the community. It takes them longer to mature and their need for a prolongation of the infantile experience should be recognized. Interpretation of their problems to parents, siblings, and teachers is most helpful in establishing new attitudes that are less threatening and anxiety producing.

Sometimes special education facilities need to be utilized until they have overcome some of their difficulties or at least learned to compensate for them. Experimental schools using special education techniques have been most encouraging and many of these children have been able to return to regular schools after one to three years of special training.

SUMMARY

A common cause of children's behavior disorders is a mild diffuse organic involvement of the central nervous system. This is characterized by hyperactivity, short attention span, poor powers of concentration, irritability, impulsiveness, variability and poor school work with reading and arithmetic disabilities. Mild speech disorders and strabismus are commonly associated symptoms. The existence of this complex leads to many psychologic problems due to the extremely irritating effect it has upon parents, families, and teachers. Often the history reveals some clear cut organic insult to the central nervous system which may have occurred before birth, during birth or within five years after birth. The insult presumably results in a dysfunction of the diencephalon. This exposes the cortex to unusually intense storms of stimuli and interferes with the normal functioning of the cortex. This situation may in time be overcome by the normal maturational process. Pending the establishment of a reasonable balance, some

medications such as amphetamines, tranquilizers, and other drugs have an ameliorating effect.

Differential diagnosis between the primary functional and the secondary organic behavior disorders is extremely important from a treatment and a prognostic standpoint.

Some community awareness of the fact that behavior disturbances and disorders may be related to physical illness is necessary. This means awareness on the part of the physicians, teachers, and parents. These hyperactive children are difficult to live with and their parents are usually overwhelmed by the problem. There is too much tendency today to contribute all the faults of children's difficulties to inadequate parents. Supporting the parents through the readjustment of the child is an essential part of the treatment.

Problems involving defect or damage of the central nervous system belong in the category of multiple-discipline diseases. The physician need not feel personally inadequate if he does not possess the information necessary for the management of all aspects of the problem. He should not feel threatened by an inability to provide an exact etiologic diagnosis or by the fact that he cannot offer a specific cure. Many different disciplines may make contributions to the diagnosis, treatment and management of these children. The family physician, familiar with the syndrome, may be most helpful in the guidance of the family and the overall coordination of the many phases of management. □

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4818 South Lewis, Tulsa, Oklahoma

OU Applies for Giant CD Program

The University of Oklahoma's Extension Division has revealed plans to apply for $1.5 million in Federal funds to launch a four-year prototype program of training disaster health care teams.

Designed for grass roots training, the project is expected to develop a program for teaching civil defense health which will be applicable for use by other state universities. In addition to training health care teams from Oklahoma communities, the overall plans of the proposed civil defense study center include professional education programs, the production of training aids and films, and public education in general.

The budget request includes tuition, room and board for the 3,000 Oklahomans expected to take the health care training. Students will be housed and trained at the university's new multi-million-dollar Kellogg Foundation.

Surgery For Endometriosis*

JOSEPH H. PRATT, M.D.

Though the majority of endometrial lesions are small, careful and considered decisions are required in the young woman with symptomatic or extensive endometriosis so that unnecessary removal of ovaries can be avoided.

THE TREATMENT of endometriosis is an important facet of the work of any surgeon performing pelvic operations or even general abdominal operations. Endometriosis will be encountered in a large number of women, irrespective of the preoperative diagnosis or the indications for laparotomy, although certainly it will not be the primary reason for operation in more than a small number of patients. It can be encountered in the most unexpected locations, and it may occur at almost any age except in the very young. As an incidental finding, endometriosis will generally be of no particular importance. Small bluish spots may be seen on the peritoneum of the cul-de-sac or behind the uterus; a brownish-red spot may be present on the surface of one ovary; there may be a moth-eaten, scarred, and puckered appearance to the uterosacral ligaments; the rectosigmoid may be adherent behind the uterus to the back of the cervix and obliterate the cul-de-sac; or there may be small spots on epiploic tags, the tip of the appendix, or the wall of the sigmoid. When the uterus has been removed, the pathologist will often identify on routine sections an area of adenomyosis in the wall of the uterus or a larger, more discrete nodule that is very much like a fibroid and contains hemorrhagic areas but no true capsule.

Estimates of the incidence of endometriosis depend on the interest of the particular authors. Although some believe that it occurs in as many as 50 per cent of white women more than 30 years old who undergo laparotomy, it is difficult to arrive at an accurate figure. Israel and Woutersz[1] reported 307 consecutive cases of pathologically proven adenomyosis found in a series of a little more than 3,000 hysterectomies, or an incidence of 10 per cent of the uteri removed. The preoperative diagnosis was suggested in only eight cases (2.6 per cent) in the entire group with endometriosis. (The chief indications for surgery, which were often multiple, were abnormal uterine bleeding, in 67.7 per cent; leiomyoma, in 62.4 per cent; prolapse of the uterus, in 28.2 per cent; and carcinoma of the endometrium, in 5.3 per cent.) Unlike external endometriosis, adenomyosis seems to be more frequent in multiparous patients, and it certainly is not clinically associated with sterility or low fertility rates as is endometriosis. When localized tumors of adenomyosis are encountered, they should be treated as though they were fibroids and shelled out of the uterine wall. The surgeon need only be alert to the fact that the adenomyoma does not have a discrete capsule or boundary, and therefore in the excision of such a tumor he must show a degree of restraint in the amount of tissue he removes. The prognosis, of course, is excellent from the standpoint of a possible pregnancy, but caution must be used with respect to the possible development of another adenomyoma. Adenomyomas are not necessarily small, and large tumors or cystic degeneration in a tumor may occasionally confound the surgeon;

*Presented at the meeting of the Oklahoma State Medical Association, Tulsa, Oklahoma, May 7-9, 1961.

cystic lesions measuring 15 to 20 cm. in diameter have been reported. The large tumors arise from the uterus, but their appearance is so unlike that of the ordinary adenomyoma that the diagnosis is generally missed by the surgeon both preoperatively and at the operating table; it is established only when the pathologist examines the tissues microscopically.

A somewhat different situation exists when the adenomyosis is diffuse and is causing generalized enlargement of the uterine wall. The uterus is symmetrically enlarged and firm, and usually the patient has a history of menorrhagia and dysmenorrhea. The treatment, if the patient's family will listen to reason, is total abdominal hysterectomy with preservation of ovarian tissue. The cut surface of the thickened wall has a leiomyomatous appearance, with small hemorrhagic areas and no distinct limitation of the process; comparison of this appearance with the relatively normal appearance of the endometrium makes the gross diagnosis an easy one. Fortunately, although external endometriosis is important in the 20's and 30's, adenomyosis reaches its peak incidence at 45 years, when the loss of the uterus is no problem and may even be a blessing.

We use the term "adenomyosis" when we refer to the presence of small areas of endometrial glands and stroma in the myometrium; we speak of "adenomyoma" when this tissue occurs in the rectovaginal septum, in wall of the rectum, or even posteriorly behind the rectum in the hollow of the sacrum. The last-named site of involvement is so uncommon that unless there is a pronounced association of rectal pain with the menses or increased tenderness in the nodule during or just before menstruation, the diagnosis is liable to be overlooked. The treatment of such abnormal hard lesions is excision. Malignant disease must be considered in the differential diagnosis, and an alert pathologist, using frozen sections, can be of invaluable assistance to the surgeon in making the diagnosis. Excision may be difficult because of the location of the adenomyoma deep in the pelvis. Very likely the lesion will involve the wall of the bowel, but since it is benign, radical resection of the bowel is not required, segmental resection or removal of part of the intestinal wall sufficing. The continuity of the bowel can be re-established and there will, of course, be no reason to extirpate the uterus or ovaries.

External endometriosis, or simply endometriosis, is actually much more important to the surgeon than the occasional case of adenomyosis. It may occur in a woman 25 to 40 years old, causing dysmenorrhea of an acquired (as opposed to the primary) type, and its course is often progressive. Menorrhagia is common and metrorrhagia is not infrequent; the menses tend to be irregular in timing. There may be dyspareunia and pelvic discomfort after coitus. The bowel habits are subject to change: constipation is common, and painful defecation is quite characteristic when it is associated with the menses.

The physical findings may be extremely variable. If tender, taut, nodular uterosacral ligaments are palpable, the diagnosis becomes evident. More often, palpation only reveals some nodularity at the peritoneal reflexion behind the uterus. The uterus may be retroflexed and relatively sensitive to pressure, and one or both ovaries may be fixed and enlarged. These patients usually have a poor record of fertility, and a history of sterility or only one pregnancy is common. If the diagnosis is definite and the symptoms are minimal, no surgical treatment is indicated at the moment.

If the symptoms become more severe, and especially if the woman is losing time from work and has begun to use codeine or stronger analgesics, the decision must be made regarding the value of surgical treatment for

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such a patient. Without question, if the pelvis is cleaned out and all ovarian tissue is extirpated, the symptoms due to endometriosis will subside; however, the woman will have been left in the change of life. In the older patient of 38 to 40 years or more, this is not too serious, because the ovaries would have had relatively few years of activity left. But in a young woman in her 20's, especially one with only one child or no children at all, careful, critical, and experienced judgment is needed to decide how best to attack the problem.

When the symptoms are out of proportion to the physical findings and the examining physician can demonstrate few objective signs, long trials of medical treatment and procrastination are definitely indicated, in the hope that a pregnancy will intervene, that control may be achieved by medical measures, or that a more definitive diagnosis will be made. If there is no relief, exploration may be necessary, both to make a more accurate diagnosis and, at the same time, to carry out such measures as seem indicated. The patient and her family should be informed about the more likely situations and should have an idea of the possible extent of the operation. The surgical picture of endometrial lesions is a variable one, ranging from the presence of large bilateral ovarian endometriomas, with considerable adherence to the colon, to small, bluish nodules and tiny cysts on the uterosacral ligaments. When the region of involvement is not extensive, the nodules should be eliminated by excision or cautery. If there has been any suggestion of adenomyosis or if the lesions are mainly on the back of the uterus or on the uterosacral ligaments, a presacral neurectomy is an excellent adjuvant to the simple excision of the endometrial lesions. If ovarian endometriosis is present, the lesions should be shaved off and the bleeding controlled with atraumatic sutures. When ovarian endometriomas are present, it may be necessary to sacrifice one ovary if the remaining ovary seems free from disease. Even with bilateral endometriomas, every effort should be made to preserve ovarian tissue in the young woman who is infertile. In spite of their appearance and although they may be adherent, these endometriomas can be rimmed with a sharp knife, the lesion can be shelled out, and varying amounts of ovarian tissue—50 per cent and more—can be salvaged and should function and stimulate the uterus to normal activity. A surprising number of patients with minimal remaining ovarian tissue will become pregnant and bear children.

In the patient who wants only conservative surgical treatment but in whom the pelvic endometriosis is extensive, with rectosigmoid adherent to the cervix and endometrial lesions present in the ovaries, back of the uterus, and elsewhere, there is still a possibility of controlling the disease temporarily. The uterus should be freed from the cul-de-sac and bowel and swung forward to expose the ovaries and sigmoid (figure 1). All sites of endometriosis that can be excised should be extirpated, including lesions of the ovaries. The bleeding should be controlled and the raw surfaces covered with atraumatic sutures (figure 2). When it occurs on the back of the cervix, a certain

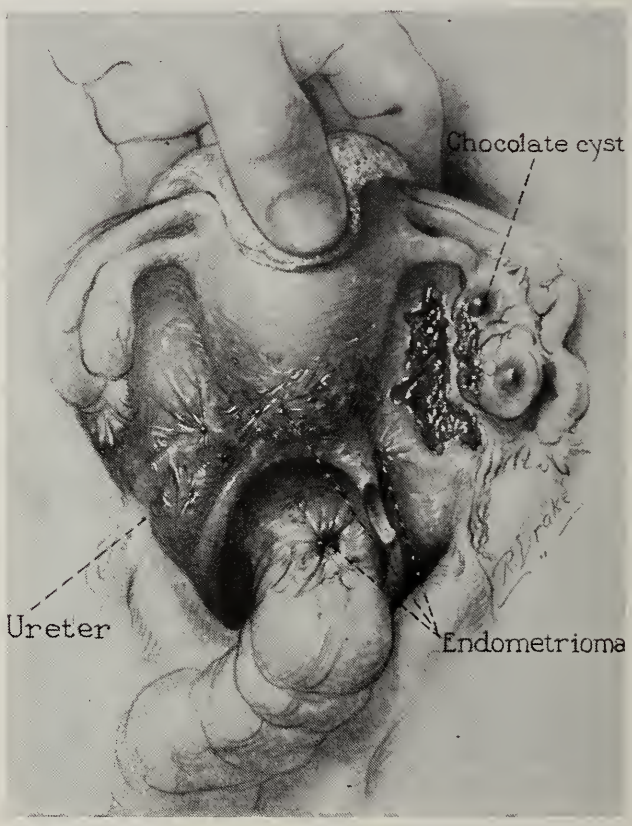


Figure 1. Extensive endometriosis of ovary, uterus, broad ligament, uterosacral ligament, and rectosigmoid. [Reproduced with permission from: Masson, J. C.: Surgical Significance of Endometriosis. Ann. Surg., 102: 819-833 (Nov.) 1935.]

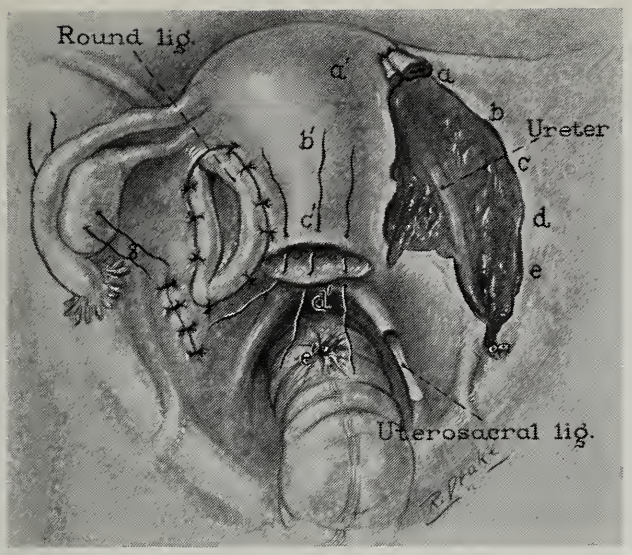


Figure 2. Salpingo-oophorectomy; excision areas of endometriosis; local coverage of raw surfaces where feasible; partial suspension of uterus with round ligament; suture of remaining ovary to pelvic rim to prevent adhesions. Letters indicate plan of covering raw area, with **a** to be sutured to **a′**, **b** to **b′**, and so on.

amount of endometriosis can be shaved off, but little can be done with the areas on the wall of the sigmoid. The critical problem is how the raw areas can be covered and the uterus and ovaries prevented from becoming adherent again. Any areas that can be covered with peritoneum or epiploic tags should be so treated. The anterior leaf of the broad ligaments and the round ligaments are usually not involved in the endometriosis, and it is frequently possible to break through the broad ligaments beneath the utero-ovarian vessels, dividing peritoneum near the tube and leaving all peritoneum attached to the round ligament. One or both round ligaments can be drawn beneath the utero-ovarian vessels to the back of the uterus; the loop of the round ligament is spread out to cover the raw surfaces of cul-de-sac, cervix, and even anterior sigmoid. The ovaries must be held on the pelvic brim with sutures to prevent them from becoming adherent in the region of the cul-de-sac, and any openings in the broad ligament should be carefully closed to avoid hernial openings. The uterus is held forward and upward by the round ligaments behind the fundus. This should not interfere with pregnancy if one takes place (figure 3).

In patients who have sufficient symptoms to necessitate operative measures but whom, because they are in their late 20's or 30's, the surgeon is reluctant to castrate, there is a good possibility of achieving symptomatic relief by removing the uterus alone, with preservation of one or both ovaries. When an endometrioma has to be resected from an ovary, if one-half or two-thirds of the ovary can be reconstructed, it will continue to function well and prevent menopausal disturbances. With the uterus removed, any small regions of endometriosis that remain do not seem to cause the trouble they did while the uterus was present. Of course, the external cyclic menstrual flow will be absent, so that the patient loses her conditioned expectation of pain, which is undoubtedly a major factor in her relief. Although the symptoms may continue or an endometrioma may again develop and necessitate a further operative procedure, this is a calculated risk; however, it is not an excessive risk when balanced against the beneficial effects of continuing ovarian function over a period of several years.

In the patient in her late 30's and 40's, the chief consideration for the surgeon should be the relief of pain. Of course, if there have been no complaints and the endometriosis is an incidental finding at laparotomy, then little need be done other than to excise what obvious areas can be easily removed from the ovaries. Symptomatic endometriosis, with dysmenorrhea, dyspareunia, painful defecation, and menometrorrhagia, requires a more definitive approach, and in general the surgeon must be ready to clean out the pelvis and reduce as much as possible the likelihood that a second operation will become necessary. It is a distressing fact that in many of these patients the objective findings in the pelvis at laparotomy do not correlate well with either the symptomatology or the results of the physical examination. Therefore, the minimal operative procedure must be determined in discussions with the patient and her family before operation, leaving the removal of additional tissue and organs to the surgeon's discretion. Since in the older patients the desire for further pregnancies is not a factor, and since hysterectomy offers the greatest chance for relief, this matter should be decided on before exploration. Too many patients have undergone laparotomy and, because the pelvic organs proved unremarkable, had no more de-

finitive procedure than the lysis of adhesions, only to have to undergo a second operation a few months later because of the continuation of symptoms.

Operations are occasionally necessary for endometriosis that is not causing pain or bleeding. Some endometrial lesions arise in an ovary and gradually grow to considerable size, giving few symptoms although on examination a large, tender ovarian mass is present. These tumors should be explored under two circumstances. The first is in the patient with an infertility problem and a persistently enlarged and possibly tender ovary. Exploration may show no other stigmata of endometriosis, but if the ovarian lesion is an endometrioma, the treatment is enucleation of the cyst, with preservation of the normal ovarian tissue. It is surprising how well a cyst, even one six to eight cm. in diameter, can be excised by rimming around the base and peeling out the lining. Arterial bleeders in the hilus should be ligated, and the ovary can then be reconstructed with atraumatic sutures. The endometrioma, which is always thin-walled and usually adherent, almost invariably ruptures while being mobilized or removed. The contents are a dark-brown, thick, mucoid liquid and inspissated bits of tissue. However, neither the rupture of the cyst nor the contamination of the pelvis by the contents should in any way influence the surgeon's decision as to what surgical procedure is necessary. The material is only broken-down blood and cellular debris, and the likelihood of implantation by any viable cells is extremely small.

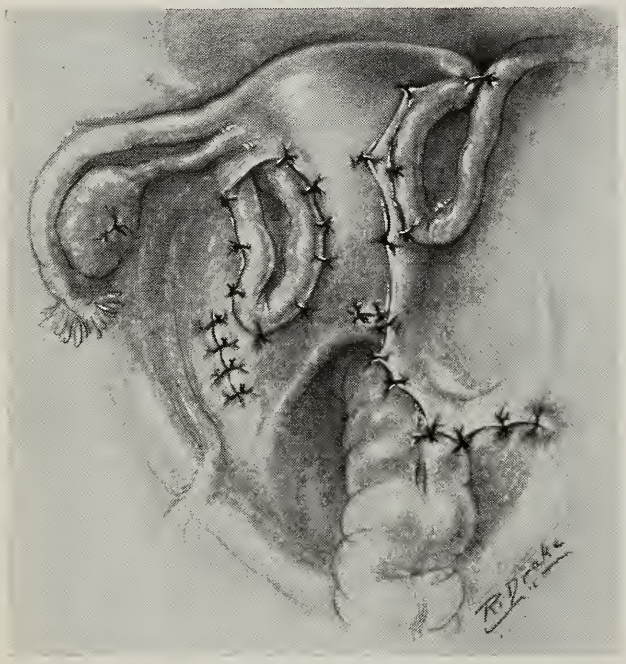


Figure 3. Utilization of peritoneum from anterior leaf of broad ligament along with round ligament to cover raw areas and suspend uterus.

The second situation in which a symptomless endometrioma requires exploration is in the patient old enough so that the presence of a malignant cyst is a distinct possibility. Such patients are generally more than 35 years old, and thus the problem of infertility has usually been settled. The surgeon therefore has much greater freedom to simply remove the ovary and cyst together, using his own judgment regarding salvage of the other pevlic viscera. Again, spillage of the contents of the cyst is no problem except that the older the patient the greater the possibility that there is an endometrial carcinoma arising in the lining of the cyst; multiple microscopic sections should be made from typical areas in all such cases. If a malignant lesion is present, total abdominal hysterectomy and bilateral salpingo oophorectomy is indicated.

Endometriosis involves the rectosigmoid or sigmoid in a significant percentage of cases when the lesion is at all extensive. There may be only a few bluish spots on the wall of the bowel or on epiploic tags, or the bowel may be adherent in all degrees behind the cervix or even up the entire posterior wall of the uterus. In the latter cases hysterectomy is generally necessary, and the surgical problem revolves about the separation of bowel from uterus without entering the lumen of the bowel. Sharp dissection often is necessary but is extremely tricky; when possible, the uterus should be grasped in the hand with the end or side of the thumb on the posterior wall against the adherent bowel. A steady pull on the uterus to elevate it and at the same time a squeezing pressure to work the thumb down the posterior wall will often reveal the cleavage plane better and more safely than sharp dissection. When the two organs are separated, hysterectomy and oophorectomy can readily be carried out. The raw surfaces on the rectosigmoid and sigmoid should be covered by suturing peritoneum or epiploic tags or

by bringing the sigmoid forward to the back of the vaginal vault and the back of the bladder; this will leave clean peritoneal surfaces and cause minimal formation of adhesions.

In the woman for whom the surgeon wishes to preserve ovarian function and possibly the uterus as well, the involvement of the bowel with endometriosis is a real problem. However, it is surprising how few true cases of intestinal obstruction are due to endometriosis. McGuff,[2] in reviewing the literature in 1946, found only 40 cases of obstruction and added 17 from the files of the Mayo Clinic. In most instances the symptoms due to endometriosis could be elicited only by considerable questioning; the chief complaints were due to mechanical obstruction. The diagnosis was made preoperatively in seven of 17 patients from the clinic, and in 12 of these patients resection of the bowel was necessary. The ovaries were sacrificed in all but two cases. The differential diagnosis between the endometrial lesion and cancer of the sigmoid is generally possible since the endometrial lesions begins on the external surface of the bowel and involves the mucosa late and minimally. Cancer of the bowel starts in the mucosa and usually is diagnosable on proctoscopic examination or x-ray of the colon; it grows outward, involving peritoneum at a later stage.

If there has been no constriction of the lumen of the bowel, it is generally safe to leave ovarian tissue behind, but when the caliber of the bowel is decreased, bilateral oophorectomy must be considered in order to stop the disease process. Constrictions of 50 per cent or even more will relax following oophorectomy, or they will give no further symptoms, and resection of the bowel will therefore not be necessary.

In patients who hope for another pregnancy or in whom the salvage of ovarian tissue is desirable, the surgeon must make the decision whether to perform local resection of the involved region of the colon. In two of the 17 cases reported by McGuff,[2] resection was done, with preservation of the ovarian and uterine tissues. With the antibiotics available today plus good preparation of the bowel, accurate anastomosis in two or three layers involves minimal risk, and even a proximal colostomy is seldom necessary. In several cases in the past year such an operation has been carried out and has been well tolerated. Ingalls[3] reported a series of 11 such cases at the meeting of the Minneapolis Surgical Society in 1960.

Endometriomas that require bowel surgery are generally palpable, and therefore the surgeon should have ample warning that a resection may be indicated. The lesion of the bowel tends to occur as a localized endometrioma rather than as widespread disease throughout the pelvis; thus, trauma, bleeding, and oozing are minimal. Administration of antibiotics should be continued in the postoperative period and fluids and solids by mouth withheld for two or three days, but with an uncomplicated convalescence, the hospitalization should average no more than about 10 to 11 days.

Endometriosis can occur also in other regions, such as in scars, in the vaginal wall, or in the umbilicus, but these are seldom problem cases for the surgeon, and relief of symptoms follows excision of the nodules.

SUMMARY

The possibility and desirability of excision of ovarian endometriosis in young women, with preservation of ovarian tissue, have been emphasized. In older patients hysterectomy and bilateral salpingo-oophorectomy is indicated for the relief of symptomatic endometriosis.

Resection of localized endometriomas obstructing the rectosigmoid, with preservation of ovaries and uterus, should be considered in young patients desiring further pregnancies. Localized adenomyomas in the uterine wall should be treated by local excision, but diffuse adenomyosis generally requires total abdominal hysterectomy. Fortunately it tends to occur in older patients in whom the loss of the uterus is relatively unimportant. □

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Medical and Surgical Treatment of the Undescended Testicle*

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Scrotal placement of testicle without tension, by relative elongation of spermatic vessels avoiding vessel injury and dissection within the cord is described. This is the only reliable method.

MUCH HAS BEEN written in the last decade relative to this problem. Trends are becoming evident in both the medical and the surgical management. The great confusion of the past is being eliminated.

MEDICAL TREATMENT

Accurate diagnosis is primary in the management of any condition. Careful and repeated examinations of children presenting cryptorchidism are particularly necessary to exclude alternating cryptorchism, ectopic testis, or hypoplasia of the testis and cord. Visits and examinations on different days allow the child to overcome his alarm, and the doctor to develop rapport with the patient. Thus, cremaster retraction of the testicle due to fear is eliminated. The physical survey should be done in the usual manner, but in addition it is wise to examine the boy when his thighs are flexed on the abdomen; this manoeuvre will often produce a testicle in the scrotum hitherto undiscovered. Palpation of the inguinal area with the boy in a standing position and the physician behind the child is fruitful in discovering the testicle.

During the visits for search of the missing testicle, the parents are instructed in physical examination. This permits the parents to make observations of the happy child at home. The parents are advised to examine the child when he is relaxed in a warm tub. Such multiple observations will eliminate the error of endocrine or surgical treatment for the alternating cryptorchid.

The several visits of the child and parents to the doctor's office permit indoctrination of the parents. They are informed relative to the reasons for the undescended testicle, the mechanism of descent, possible absence or hypoplasia of the testicle, possible short spermatic vessels, and the probable presence of a hernia. The chances of a success in transplantation of the unpalpated testicle are discussed. The possible management in the case of bilaterally absent testicles is explained, should medical and surgical treatment fail to find normal testicles.

We think that no treatment of any type is indicated under the age of three years. Possible exceptions are pain in the inguinal area, torsion of the inguinal testicle, and a troublesome hernia. In general, action should be considered in the fourth or, at the latest, the fifth year of life. Treatment with anterior pituitary-like hormones is offered to the parents of the child, but it is not urged. It is explained to the parents that chorionic

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gonadotropins will increase the size of the genitalia, enlarge the cord structures, and perhaps improve the blood supply, but that descent of the testicle should be hoped for but not expected. If the testicle does not appear, surgical transplantation is advised in the fifth and not later than the sixth year.

Occasionally, in hypogenitalism with undescended testicle, enlargement of the genitalia does not occur with gonadotropins. Under such conditions, it may be desirable to use injections of testosterone propionate to induce genital growth. If subsequent investigation reveals bilateral agenesis or hypoplasia, maintenance doses of testosterone become necessary at puberty. In such cases, testosterone pellet implantation with a Kearns needle is advised. Testosterone does not promote descent of the testicle.

We employ chorionic gonadotropins (Antuitrin-S or Follutein) in doses of 300-500 international units, given intramuscularly two or three times a week, for a total of 3,600-9,000 international units in each of a maximum of two courses. The smaller dose is for the younger or small patients, while the larger is used for older boys or for those with bilateral cryptorchism and/or hypogenitalism. Some physicians use much larger doses. When it is indicated, testosterone propionate is used in doses of 25-50 milligrams, given intramuscularly twice weekly. With either of these hormones, careful watch for signs of precocious puberty or other side effects is necessary.

Certain special problems may arise in bilateral cryptorchidism. Hypogenitalism may be severe. Various degrees of the Froehlich syndrome may be present. True or pseudohermaphroditism may obscure the picture. These conditions require special hormonal studies and urologic examinations.

In the past, some have advocated the Ballenger suction treatment for cryptochism. We suspect that its success has occurred chiefly in the alternating type of undescended testicle. In any case, it has proven unsatisfactory in most hands, and is usually an unhappy experience for the child and the parents. We do not recommend it.

SURGICAL TREATMENT

Orchiopexy is indicated in bilateral or unilateral absence of the testis before puberty. The optimum time for the operation is in the fifth or sixth year of life. Operation may be needed earlier, for reasons of a troublesome hernia, pain in the area, or torsion of the undescended testicle. After puberty, transplantation of the testicle would be for cosmetic reasons only. At any time, exploration for undescended testicle may be indicated to establish the presence or absence of a gonad in the pelvis or inguinal area; to prove hypoplasia; or to repair a hernia. However, the casually-found undescended testicle in adults is better left alone. The possibility of a future malignant condition developing in the undescended testicle should never be a primary indication for operation. If one should use this as a primary indication, if consistency is maintained, the surgeon should be prepared to explore the peritoneum and retroperitoneum to the level of the renal hilum should the testicle not be found in the inguinal or pelvic area. Such a procedure would carry greater risk than the possible danger of a future malignancy in a testicle which might not even be present.

The ultimate reason for and the aim of the surgical technique of orchiopexy is to place a viable testicle in the scrotum, without tension and with a good blood supply and intact vas deferens. It should be placed there early enough in life to assure the best possible chance for active spermatogenesis to develop after puberty. There are six prime surgical anatomic points involved in the achievement of this aim. These are: (1) the frontal and sagittal spermatic surgical triangles; (2) the retroperitoneal space; (3) the lateral spermatic ligament; (4) the floor

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of the inguinal canal; (5) the inferior epigastric vessels; and (6) the dartos of the scrotum. Elsewhere, we have described and proven these anatomic points in detail.

From the frontal view, the spermatic vessels course obliquely downward and laterally from the renal area, to exit through the internal inguinal ring. From the same view, they then course medially and inferiorly to the external ring (figure 1A). When viewed from the sagittal plane, proximal to the internal ring the vessels angulate anteriorly and then course postero-inferiorly in the inguinal canal (figure 1B).

Throughout their course, the vessels are enveloped in the transversalis fascia. This fascia forms Gerota's fascia above, and below condenses to enclose the spermatic vessels and the ureter, forming the lateral spermatic ligament. This ligament attaches the vessels to the lateral abdominal wall. This structure is revealed only by separation of the spermatic vessels from the posterior peritoneum (figure 3).

Thus, the normal course of the spermatic vessels describes two chief triangles. When viewed from the front, the vessels' course encompasses two sides of a triangle from origin to the internal ring, and to the external ring. The third side extends from the origin to the external ring. Elimination of the two lateral sides will gain relative increase in length for the spermatic vessels. The area encompassed by the course of the spermatic vessels is named the frontal spermatic surgical triangle (figure 2A).

From the sagittal view, the vessels travel anteriorly from origin to the internal ring, and then postero-inferiorly to the external ring. The third side extends from the origin to the external inguinal ring. Dissection displaces the vessels posteriorly and eliminates this indirect pathway, gaining relative increase in length of the spermatic vessels. This area encompassed by the course of the vessels is called the sagittal spermatic surgical triangle (figure 2B).

Development of the retroperitoneal space is facilitated by division of the floor of the inguinal canal and the deep epigastric vessels in this area (figure 4). In the development of the retroperitoneal space, the spermatic vessels are separated from the peritoneum, revealing the lateral spermatic ligament. The complete dissection eliminates tortuosity of the vessels, and allows division of the lateral spermatic ligament (figure 5) and the displacement of the spermatic vessels medially, permitting exit directly from the external ring. The relative increase in length of the spermatic vessels is thus obtained (figure 6).

The steps in technique are dictated by these anatomic surgical principles. As in all surgical procedures, adequate exposure is important. A complete inguinal incision, with division of the floor of the inguinal canal and development of the retroperitoneum, allows complete visualization of the spermatic vascular system. Any attempt to lengthen the spermatic cord without this places the surgeon at the disadvantage of not having control of the whole problem:

The chief steps in the technique are:

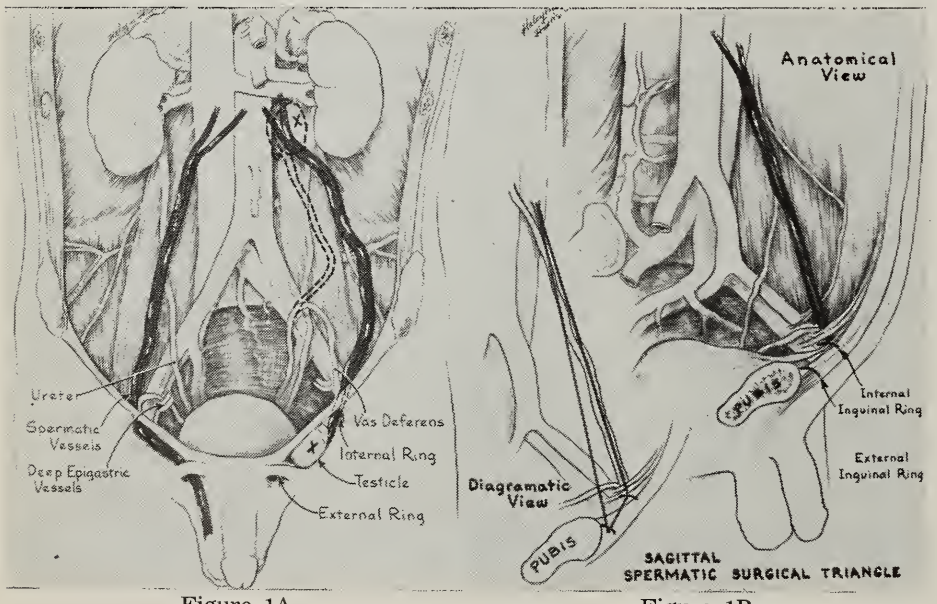


Figure 1A Figure 1B

Figure 1. A. General anatomy of spermatic vascular system in frontal view. Left testis undescended. B. Course of spermatic vessels in sagittal view. Insert: Sagittal triangle superimposed.

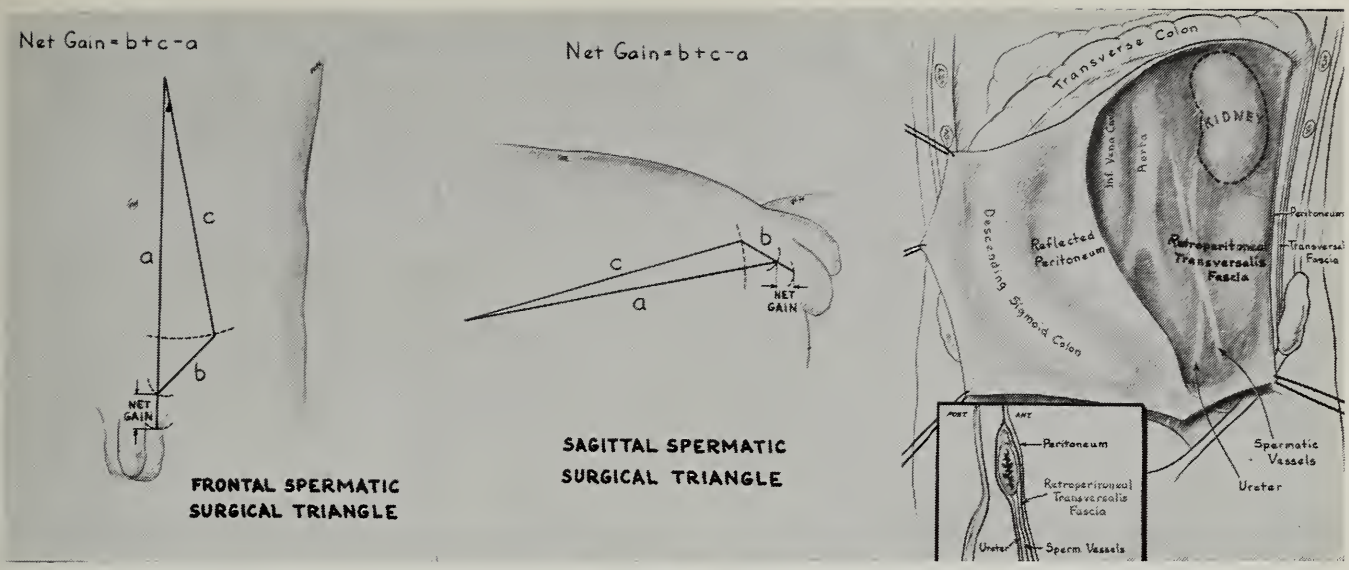


Figure 2A Figure 2B Figure 3

Figure 2. A. Frontal spermatic triangle superimposed on course of left spermatic vessels. B. Sagittal Triangle. Conversion of B and C to A in both triangles demonstrates relative length gain.

Figure 3. Retroperitoneum in frontal view. Spermatic vessels enveloped by transversalis fascia. Insert: Same in lateral view.

1) Skin incision from the anterior superior spine of the ilium to the entrance of the scrotum; external oblique fascia completely opened.
2) Division of the internal oblique muscle lateral to the internal ring.
3) Dissection of cord, if present, from above downward, preserving the ilioinguinal nerve.
4) Reflection of the peritoneum from the posterior surface of the floor of the inguinal canal.
5) Division of the transversalis fascia and inferior epigastric vessels in the floor of the inguinal canal.
6) Development of the retroperitoneal space, to the kidneys if necessary.
7) Separation of the hernia sac and posterior peritoneum from the spermatic vessels and vas deferens by elevation of the peritoneum with saline solution.
8) Closure of the hernia sac.
9) Development and division of the lateral spermatic ligament, permitting medial and posterior displacement of the spermatic vessels, eliminating the two sides of the surgical triangles.
10) Occasionally, dissection of the vas deferens to the seminal vesicle is necessary.
11) Division of the dartos of the scrotum to eliminate contractility, allow low fixation, and increase the size of the scrotum.
12) Placement of the testicle in the scrotum through the external ring only; fixation in the scrotum by suture through the skin attached to a rubber band.
13) Repair of the abdominal wall in layers, eliminating the internal ring completely.
14) Avoid endangering the blood supply by dissection within the cord itself.
15) The operation is impossible without long retractors of the Deaver type and long hemostats.

If the surgical anatomic principles and techniques, as defined, are applied properly, the testicle should be in the depths of the scrotum without tension, and without injuring the blood supply. If the testicle is not in the scrotum, then nature has not made the blood vessels long enough.

There are other techniques than ours. The Bevan method is the most commonly used. This relies on elongation of the spermatic cord through dissection primarily in the inguinal canal, and by dissection within the cord itself to eliminate so-called "adhesions." It fails to take advantage of the shortest-distance-between-two-points principle. It injures the blood supply. It does not get adequate length. We mention it only to condemn it.

The Torek is another popular method, which really admits defeat if it is necessary at all. If one follows the retroperitoneal dissection as outlined above, there is no need to place a testicle under tension by thigh fascial fixation. If the dissection is inadequate, then, of course, the testicle can be held down only with tension such as in fascial fixation. Such a situation will produce ischemic atrophy in many testicles. However, the Torek principle is indicated to increase the size of the scrotum, when this is necessary.

Certain special situations may arise. Routine exploration may reveal no testicle. In this situation, the retroperitoneum should be explored thoroughly to the brim of the true pelvis or above. One should look for the vas deferens, since it must traverse the true pelvis regardless of the location of the testicle. If the vas is found, the testicle will be close by, or will be absent or hypoplastic. However, rarely a testicle may be present without a vas deferens. If pelvic exploration is unproductive, the peritoneum should be opened adequately to explore on both sides of the colon to the renal level. If no evidence of a testicle is found, the exploration should go no further.

If no testicle is found, the placement of a previously-prepared prosthesis should be considered. We recommend polyethylene as the best substance for artificial testicle manufacture. Any machinist can lathe and polish to specification.

If a patient is known to have a single testis and this is impossible of scrotal transplant, it had better be left in the canal or abdomen, since endogenous testosterone is more advantageous for the patient than is elimination of the risk of cancer.

If the boy has one adequate scrotal testicle and its mate is impossible of scrotal transplant, it had best be removed. This is advised because a canal location could well be painful and subject to injury, and would not be spermatogenic. Some, however, would tend to leave this testicle in the canal. If it could only be left in the abdomen, it certainly should be removed. Those subscribing completely to the theory of the increased danger of future malignancy will always remove abdominal and inguinal testes.

Surgical transplantation of the testicle by our method, as described, has given us uniformly good results. There has been no incidence of direct or indirect hernia after our type of dissection. Our method of dissection should give an average increase in length of

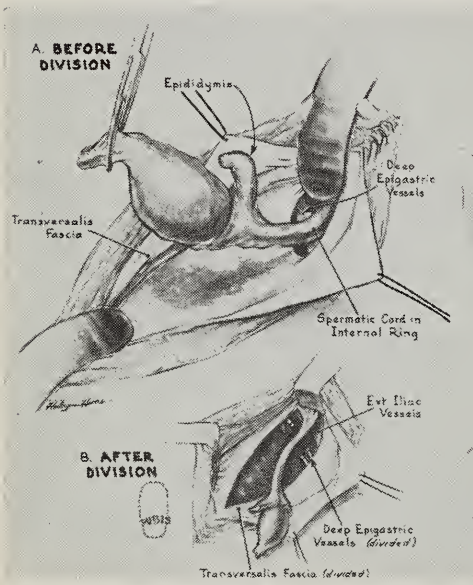


Figure 4

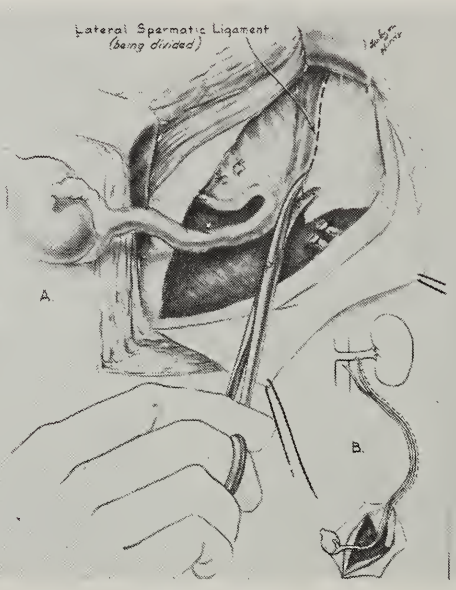


Figure 5

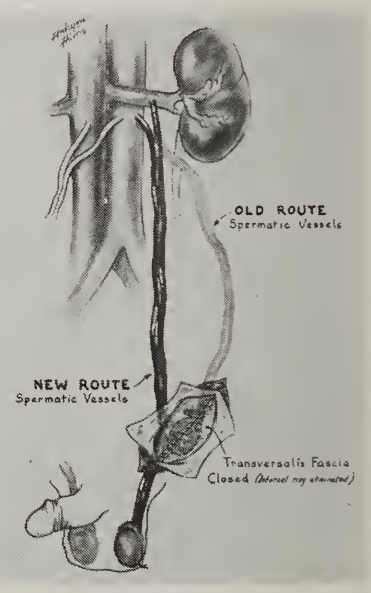


Figure 6

Figure 4. A. Inguinal canal showing posterior wall (transversalis fascia) and deep epigastric vessels. B. Same after division of epigastric vessels and floor of canal.

Figure 5. Medial displacement of vessels permitted by division of lateral spermatic ligament. Insert: Incision may be carried to kidney if necessary.

Figure 6. View of retroperitoneum demostrating direct course of vessels to scrotal testis after retroperitoneal dissection.

the spermatic cord of 6.5 centimeters. If extensive dissection of the vas deferens is done as well, an additional 2.5 centimeters of length will be obtained. This is four times the length obtained by the routine classical dissection confined to the inguinal canal.

SUMMARY

We think that undescended testicle should always receive treatment. Medical treatment involves mainly proper examinations and diagnosis, with indoctrination of the parents. Hormone treatment may help indirectly in the subsequent surgical correction of the problem. However, hormone treatment should not be expected to be of value in the promotion of the descent of the testicle in any but a few. Treatment, both medically and surgically, should begin sometime between the third and fifth year, and never later than the sixth year. Our technique of adequate incision and wide retroperitoneal dissection with displacement of the cord medially, eliminating the sides of the spermatic surgical triangles and lateral spermatic ligament, permits scrotal transplantation without tension and without injury to the blood supply or vas deferens of the testicle. □

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Chemotherapy in Tuberculosis

"I have a recent report by Doctor William S. Middleton, medical director of the Veterans Administration, that the VA has closed down 11 tuberculosis hospitals in ten years. In 1950 there were 21 hospitals with 15,690 beds. Today there are only ten TB hospitals with 9,037 beds. . . . The institutions for tubercular veterans maintained by taxpayers have been cut by more than 50 per cent, with all that means in savings to all of us. And the primary reason for this decline in the cost of medical care for tuberculosis is drugs. Doctor Middleton attributes the VA record to new and specific drugs in TB chemotherapy produced by our ethical drug industry."—Austin Smith, M.D., President, Pharmaceutical Manufacturers Association.

The Cardiac Patient and Heart Surgery

LOYAL L. CONRAD, M.D.*

ALTHOUGH the question "how well can a patient with heart disease tolerate surgery?" is often asked, its corollary "what does the patient have to tolerate?" is probably more to the point. When phrased in this fashion we think first of those demands placed on the heart by general surgical procedures, then of those hazards special to the cardiac patient. Since nearly all general anesthetic agents are myocardial depressants[1] the heart must maintain an adequate output despite declining function. Studies conducted on patients without cardiac disease have shown that the cardiac output declines after the induction of anesthesia and is not re-established at normal levels for several days postoperatively.[2, 3] Thus, it may be that cardiac needs are not as great as ordinarily presumed. However, similar studies have not been conducted on cardiac patients to see whether their response is in normal range. What constitutes cardiac "demand" and an "adequate" output remains unanswered. Obviously, the less the cardiac reserve preoperatively the less adequately will the heart function as a pump during the procedure. Hence, patients with overt evidences of congestive heart failure are poorer risks, the risks increasing proportionately to the degree of failure. The presence of an enlarged heart without other evidences of failure usually means lessened reserve and increased surgical risk.

Shock, hemorrhage or otherwise, is a special hazard to the cardiac patient because the resultant decrease in coronary perfusion leads to further decreases in cardiac output and attendant hypoxia and acidosis, and may culminate in an irreversible state or terminal rhythm disturbance. Patients with known coronary artery disease manifested by angina or myocardial infarction are particularly susceptible and the risks of any major procedure are 10-15 per cent. Likewise the surgical risk is somewhat increased in patients with hypertensive disease because of the associated coronary atherosclerosis. Stimulation of the sympathetic nervous system in response to the administration of the anesthetic agent, even in the absence of shock or hemorrhage, may play a role in triggering off serious arrhythmias in patients with coronary artery disease; myocardial oxygen "wastage" is a characteristic epinephrine effect.

The final determinant as to whether or not to subject the cardiac patient to surgery consists of weighing the benefits of surgery against the risks; it may be unimportant when a lifesaving procedure is contemplated or it may be all-important when the possible benefits of surgery may be considered trivial. □

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Dean's Message

During the past few years an awareness of the need of continuing education in all walks of life has become more acute. Recently Oklahoma has had its attention focused on the importance of continuing education in our community by a Kellogg Foundation grant for such a center of learning on the Norman campus.

Continuing or postgraduate medical education for physicians is as old as the practice of medicine itself. Physicians have always been recognized as a group of individuals who continue to learn and gain experience, even after the completion of formal or required courses, by individual efforts such as reading, group conferences, seminars, etc. So it continues today that a multitude of opportunities along these lines are provided not only by medical centers such as ours through formal postgraduate programs but also by individual hospitals, medical societies, specialty groups and other organizations.

Physicians who read *The Journal* are well aware of the many facilities at hand for keeping abreast of developments in medicine. In this column I would like to emphasize some of the opportunities at the Medical Center which are also available to the physicians of our state and to assure each of you that you are welcome to be with us for any events of your choosing.

More than 100 regularly scheduled teaching events are held at the Medical Center each week, Monday through Saturday, and include sessions produced by the individual pre-clinical and clinical departments.

Of particular interest to the practicing physician are seminars, conferences, grand rounds and ward walks of the various departments and the combined sessions which are given jointly by the clinical departments. One of the newest and most interesting of these is the inter-departmental conference each Tuesday from 12:30 to 1:30 p.m. About 18 other conferences are held each day. Examples, selected at random, are listed below as illustrative of the opportunities:

Gross pathology conference, 2 p.m., Monday; Tumor clinic, 1:30 p.m., Tuesday; Medical grand rounds, 8 a.m., Wednesday; Pediatric grand rounds, 8 a.m., Thursday; Medical-surgical conference, 1:45 p.m., Friday; Surgery grand rounds, 8 a.m., Saturday.

A calendar of all events is published weekly. Copies may be obtained by writing the Office of Public Relations, University of Oklahoma Medical Center. □

Mark R Everett

The Peutz-Jeghers Syndrome

E. A. FRANKEN, M.D.

The Peutz-Jeghers syndrome is an uncommon cause of intestinal polyposis, but with an external manifestation, mucocutaneous pigmentation.

IN 1921 A NEW syndrome was described by a Dutch physician, J. L. A. Peutz, consisting of a combination of oral mucocutaneous pigmentation and multiple polyposis of the gastrointestinal tract, existing in several members of a family.[1] There is an earlier report of what is probably this syndrome in identical twins from Hutchinson in 1896, showing the typical pigment seen in this condition, and a further note that one of the twins later died of intussusception.[2] Sporadic reports are found in the world literature following this, but it remained for Jeghers and his colleagues in 1949 to gather all previous reports, define the entity more clearly, and give it a well known status.[3] Jeghers initially commented on the existence of perioral pigmentation with intestinal polyps in siblings in 1944,[4] but it was not until the report of 1949 that the disease was recognized as a distinct clinical entity.

The Peutz-Jeghers syndrome, as it is now called, is not as rare a disease as was first thought. As with many other "new" syndromes, a wealth of new cases has been reported since the definitive description, so that a total of approximately 125 can now be found in the world literature.[5-18] The eponym of Peutz-Jeghers seems to have been first used in 1954, and since that time almost all authors have referred to the entity by that name.[19]

The Peutz-Jeghers syndrome must be differentiated from familial polyposis of the colon, a more common disease, and also of an hereditary nature. In familial polyposis of the colon polyps are restricted to the colon, and are extremely apt to undergo malignant degeneration.[21] In the Peutz-Jeghers syndrome polyps are present throughout the entire gastrointestinal tract, and are not likely to become malignant.[6, 10]

The etiologic basis of this syndrome is obscure, but genetic factors are thought to be of some importance. In the latest survey of this condition approximately 55 per cent of the cases show a positive family history, i.e., with one of the parents affected, and often one or more siblings.[6] The frequency of this type of family history would suggest that inheritance is due to a mendelian dominant gene of rather low penetrance, with rather frequent cases arising as sporadic, spontaneous mutants.[11] There seems to be no predominance of one sex. A typical family tree would be such as this reported by Jeghers[3] (table 1).

Although the Peutz-Jeghers syndrome is genetically determined, the condition is uncommonly detected at birth. Pigmentation usually appears in infancy or early childhood, with gastrointestinal symptoms at some time thereafter. However, some patients apparently have no clinical manifestations until old age, the oldest reported case being at age 77, with onset of symptoms and pigmentation only two to three years previous to this.[16]

The pathologic findings in this syndrome consist of two essential and distinguishing characteristics: intestinal polyposis and pig-

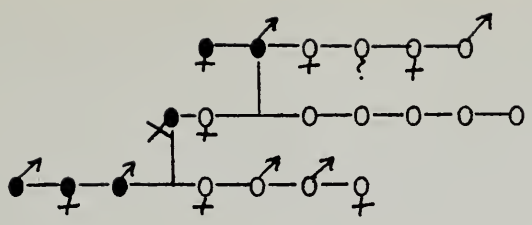


TABLE 1.

• Members of family with pigmentation and polyps.

0 Members of family without pigmentation of polyps.

Genealogic table of a family with pigmented spots and polyposis. (Adopted from Jeghers, 1949.)

mentation of the skin and mucous membranes.

In the description by Jeghers melanin pigmentation was mentioned on the buccal mucosa, around the lips, and on the palms, with almost 100 per cent of the cases showing spots on lips and palms.[3] As more cases have accumulated, it has become evident that the spots may be in any one of these locations, and no one of them is necessarily found in all cases. As can be noted from table 2, the pigmented spots have been noted on the face, forehead, nasal mucous membranes, lips, gums, hard and soft palates, toes, and fingers, the most common location being around the mucocutaneous junction of the mouth.

Grossly the lesions are small (1-3 mm) discrete melanin spots, with occasional areas of coalescence. Some authors describe these as "ephelides inversae," i.e., inverse freckles, [3, 9] because of the fact that freckles usually occur in fair skinned persons, are prominent in sun-exposed areas (bridge of nose, forehead), are uncommon around the mouth, and tend to wax and wane according to the season. The melanotic macules in the Peutz-Jeghers syndrome are usually in persons of dark complexion, are more common around the mouth than on the forehead and nose, and stay of the same intensity throughout the season.

Face	Lips	Gums	Buccal Mucosa	Hard Palate	Soft Palate
18	21	9	20	5	2

Fauces	Nasal Mucosa	Other
1	6	Palms, 6; Forehead, 2; Toes and Soles of Feet, 2

Distribution of Pigmentation in 21 cases. (Adopted from Dormandy, 1957.)

TABLE 2.

Pigmentation similar to that seen in the Peutz-Jeghers syndrome can be noted in Addison's disease, and, to a certain extent, in normal members of the colored races. Some authorities believe that the pigmentation of the Peutz-Jeghers syndrome has no obvious distinguishing characteristics to differentiate it from other conditions giving oral melanosis;[22] others remark that the location, distinct boundaries of the macules, and the intensity of the melanin deposition make them clinically separable from other conditions causing oral melanosis.[3, 9, 23] Microscopically and histochemically these seem to be only discrete areas of melanin deposition, with some increase in melanocytes, but no obvious distinguishing characteristics.[16] In Jeghers' cases some of the biopsied skin lesions showed stratification of melanin in distinct columns, interspersed with columns free of pigment.[3] However, subsequent studies have not confirmed this observation, and this is now thought not to be a necessary finding in the histology of the lesion.[16]

The gastrointestinal involvement in the Peutz-Jeghers syndrome consists of polyps scattered throughout the length of the gastrointestinal tract. These may range in number from three or four to literally thousands.[6] Location is most commonly in the small intestine, but other areas are very frequently involved, as is seen in table 3.[9]

The size of the polyps is variable, depending on the stage of the individual polyp. Many surgical specimens have shown one large polyp causing intussusception, surrounded by hundreds of miscroscopic polyps, although the surrounding mucosa might appear grossly normal.[9] The size of the individual polyp does not appear to be static,

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Stomach	Duodenum	Jejunum	Small Intestine (no further specification)
4	3	8	11

Ileum	Colon	Rectum
8	9	11

Distribution of Polyps in the Gastrointestinal Tract. (Adopted from Dormandy, 1957.)

TABLE 3.

but subject to growth at any time, without any known stimulus.[9] Histologically, the polyps seen in the Peutz-Jeghers syndrome are noted to be somewhat different from the usual intestinal polyp.[6, 7] Most of these will show distinct cell types of all the cells found in that level of the gut, as well as the frequent appearance of smooth muscle fibers. For example, duodenal polyps usually show Brunner's glands, and those of the stomach both parietal and chief cells. This is in contradistinction of the usual intestinal polyp, which shows only one cell type, and has no muscular element.

Because of the histological nature of these growths, some observers now think that rather than being true neoplasms (as most intestinal polyps are) the growths in Peutz-Jeghers disease represent a genetic defect in formation of the intestinal mucosa, so that unusual aberrations of morphology and numbers of cells are allowed.[6, 7] These peculiar forms of intestinal mucosa resemble true neoplastic growth anatomically, but actually represent only a type of hamartoma.

Most histologically examined polyps in this syndrome have been microscopically benign. However, about 15 per cent of the patients coming to operation have been classified as having malignant polyps, on the basis of carcinoma in situ or local invasion of the muscularis.[8, 13] This can be contrasted with familial polyposis of the colon, in which malignant degeneration is present in 30 to 50 per cent of the patients coming to operation because of clinical symptomatology.[24] An unusual aspect of this reported malignancy is that there is not one well-documented case of any further progression of a supposed malignant degeneration of a polyp in this disease to further spread or death.[6, 9] This contrasts sharply with the usual course of cancer of the small intestine, in which the average survival is about 18 months.[25]

In rather careful reviews of malignancy in this condition, investigators report that the diagnosis of carcinoma is most often a cytological diagnosis, with hyperchromatism, unequal and increased size of cells, and nuclear changes.[6, 7, 9, 10] The cases which do show invasion of neoplastic tissue show limitation of this process to the muscularis with no involvement of serosa, surrounding tissue, lymph nodes or distant metastases. Because of the absence of these invasive properties, noted with cancer as it is usually thought of, these investigators doubt that the changes in the polyps in the Peutz-Jeghers syndrome actually represent malignancy. In two-thirds of the malignancies reported in the Peutz-Jeghers syndrome, the location of the carcinoma is in the ileum.[8]

It might be noted that naso-pharyngeal polyps were reported in the original cases of Peutz,[1] and have been noted from time to time since then. Other polypoid lesions associated with cases of this syndrome include bladder polyps and bronchial adenomatosis,[10, 26] but their occurrence is so uncommon that they are thought to be incidental findings.[9, 10]

The clinical course of the Peutz-Jeghers syndrome can again be divided into two areas, changes in skin and mucous membranes and difficulties with the polyps of the gut.

The melanin spots have infrequently been noted at birth, but seem to appear most often in infancy and early childhood.[9] However, some cases have been reported in which pigmentation did not appear until 75 years of age.[16] The pigmentation typically occurs in persons with dark complexion, but many cases have been reported in fair skinned persons.[10] The distribution and character of the lesions have been described above.

The symptoms referable to gastrointestinal polyposis are largely those of small bowel intussusception.[15] Most patients suffer from this complication intermittently for years without definitive diagnosis. It is of interest, and pediatric importance, that the diagnosis of Peutz-Jeghers syndrome in one study[15] was made in less than 15 per cent

of cases before age ten. Sixty-five per cent of the cases found were between the ages of ten and 29 years with almost equal distribution on the two decades. However, the age of onset of symptoms was prior to age ten in 33 per cent and between the ages of ten and 19 in 36 per cent. Duration of symptoms before diagnosis was made varied from immediately to fifteen years or more. This is summarized in table 4.

The symptoms of intussusception may disappear spontaneously with dislodging of the polyp; or, if there is no release of the polyp, intestinal obstruction and ultimately gangrene may intervene. Other symptoms less frequently encountered as presenting complaints include melena of unexplained etiology, chronic blood loss, prolapsed rectal polyp, vague bowel disturbances, and even failure to thrive.[9] As can be seen from table 5, most of the symptoms are related to intussusception, with intestinal colic being the most frequent symptom.

It would seem from the cases studied so far that the pigmentation and polyps probably appear at about the same time; this is especially evident in cases arising in older persons with the onset of pigmentation and symptoms of gastrointestinal disease almost simultaneously. But no one knows definitely that this is true in all cases, in that polyps are often silent, and micropolyps could be present for years before developing into those of clinically significant size.[9]

It would also seem that this disease has a forme fruste, in which the typical pigmentation appears, but no polyposis can be found. Jeghers, in his initial report,[3] reported one such individual; Dormandy,[9] in 21 cases under his observation, noted three such patients.

The presence of malignant degeneration in the polyps seems to have no clinical correlation to clinical symptoms or duration of

AGE RANGE	AT DIAGNOSIS	AT ONSET OF SYMPTOMS
0-9	7	15
10-19	19	16
20-29	15	7
30-39	7	5
40 & Over	4	2
Not Known	0	7

Age of Patients with Peutz-Jeghers Syndrome. (Adopted from Stanley and Schwarz, 1957.)

TABLE 4.

Acute Abd. Episode in Childhood	Attacks of Intest. Colic, Usu. Vomiting	Chronic Bowel Disturbance	Hematemesis
8	16	12	3

Melena	Rectal Bleeding	Chronic Blood Loss	Borborygmi	Wt. Loss	Failure to Thrive
3	9	7	6	11	4

Indigestion, Dyspepsia	Dull, Non-Colicky Abd. Pain	Prolapsed Rectal Polyp	Prolapsed Rectum
4	6	3	3

Incidence of Clinical Symptoms in 21 Cases. (Adopted from Dormandy, 1957.)

TABLE 5.

the illness; the diagnosis of carcinoma is usually made incidentally on surgical specimens resected for intussusception.

The symptomatic course of the Peutz-Jeghers syndrome is usually one of intermittent, acute episodes of intestinal obstruction. However, some cases have been found in investigation of families with one symptomatic member, patients in whom pigmentation and polyps are found, but have no clinical symptomatology.[9] The prognosis of the disease is most likely related to the frequency and severity of the acute complication, rather than to the disease itself. An exact estimate of age at death, duration of symptoms before death, and incidence of acute complications cannot be given at this time.[6] Observers have noted that the complications are associated with a higher mortality in children, as would be expected.[9]

As it has been mentioned before, the incidence of malignant degeneration of the polyps is indefinite, and many authorities believe that this does not occur.[6, 9] In any event, what has been described as carcinoma of the small bowel does not seem to affect the ultimate prognosis of the patient.[15]

Diagnosis of the Peutz-Jeghers syndrome is actually rather simple, if one will remember that the disease exists. History will usually indicate bowel disturbances of long duration although a more acute history may present. Family history is important in diagnosis, and several cases have been diagnosed by investigating members of an affected individual's family. Physical exami-

nation shows the oral melanosis as mentioned before, while abdominal findings are dependent upon the type of complication, if any, encountered at that particular time. Radiographic examination is a very important tool in demonstrating the existence of the polyps, but may well be negative, even in the presence of rather large polyps.[15] Any patients suspected of the Peutz-Jehgers syndrome deserve gastroscopy and sigmoidoscopy, and these can be rewarding procedures, especially when roentgenograms are nondiagnostic.[15]

Treatment of the Peutz-Jeghers syndrome can be divided into that of the acute complication, along with long term surgical therapy and medical follow-up. Immediate treatment is required for intussusception, at which time resection of the polyps involved and intestine itself, if nonviable, is indicated.[15] Some authors[27] have advised multiple enterotomies at some stage of the disease, with resection of all large polyps.

A few authorities[8] advocate radical resection in the ileum, where most cancers have arisen, but confine surgical therapy in other areas to more conservative measures. It is to be stressed that polyps can appear at any time, presumably arising from micropolyps, and that the disease is widespread and apt to show recurrence.[9] Because of this most writers on the subject feel that surgical therapy is of necessity conservative.

A most important part of the therapy in this disease is periodic follow-up, because of its chronicity and frequent recurrence of polyps.[6, 9] Another element in follow-up is case finding in relatives of patients with this diagnosis.[6, 15]

SUMMARY

1) A syndrome consisting of oral melanosis and intestinal polyposis was described by Peutz in 1921.

2) The disease is probably of genetic origin, with sporadic cases as well.

3) The clinical course of the entity is seen to be chiefly the appearance of mucocutaneous pigmentation and frequent bouts of intussusception.

4) Diagnosis can be made by noting the typical pigmentation and demonstrating polyps of the gastrointestinal tract.

5) Prognosis and treatment are not well defined at this time, but current opinion that this is not a premalignant condition would tend to suggest conservative therapy with close follow-up throughout life. □

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Saint John's Hospital, Tulsa, Oklahoma

ABSTRACTS

Gastric Atrophy in Dogs Induced by Administration Of Normal Human Gastric Juice

William O. Smith,* Merlin K. DuVal,** Walter Joel,*** Walter L. Honska**** and Stewart Wolf*****
Gastroenterology, 39:55-60, July 1960

With intravenous injections of normal human gastric juice, a pronounced atrophic gastritis has been induced in dogs.

The atrophic gastritis appears with as few as eight injections over an interval of four weeks and may persist for as long as nine months after injections are discontinued.

*Assistant Professor of Medicine.
**Associate Professor of Surgery.
***Professor of Pathology.
****Instructor in Medicine and Preventive Medicine and Public Health.
*****Professor of Medicine, Consultant Professor of Psychiatry, Neurology and Behavioral Sciences.

Role of Biliary and Pancreatic Secretions in the Inhibition of Gastric Motility by Fat in the Intestine

Rene Menguy*
The American Journal of Digestive Diseases 5:792-800, Sept., 1960

Gastric motility was recorded in rats by means of water-filled intragastric balloons. Introduction of 1 ml. of fat into the proximal small intestine consistently suppressed gastric motility. In rats with diversion of bile from the small intestine this inhibition failed to occur unless bile salts were added to the administered fat. When both bile and pancreatic juice were diverted from the small intestine, inhibition occurred only when oil was mixed with bile salts and lipase prior to injection.

*Assistant Professor of Surgery.

Chromium-51 Labeled Erythrocytes As a Measure of Hemolysis

P. C. Johnson,* C. Bloedow** and J. Bahr***
Proc. Okla. Conference Radioisotopes in Agriculture TID-7578:263-268, 1960

Estimation of the life span of the erythrocyte is an aid in the classification of anemia. Chromium-51 labeled erythrocytes can be used for this purpose. Using the percentage remaining on the eighth day, we have found that a difference of statistical significance can be found between anemia due to hemolysis and those from other causes. The difficulties with this method of estimating erythrocyte life span have been discussed.

*Radioisotope Laboratory, Methodist Hospital, Houston, Texas.
**Out-patient Service, V.A. Hospital.
***Out-patient Service, V.A. Hospital.

The Clinical Expression of Magnesium Deficiency

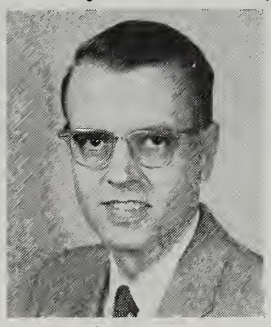
William O. Smith,* James F. Hammarsten** and Leonard P. Eliel***
Jour. A.M.A. 174:77-78, 1960

Magnesium deficit in man may result in a rather distinctive clinical syndrome characterized by central nervous system, neuromuscular, and cardiovascular manifestations. The clinical situations giving rise to this syndrome have been described.

*Assistant Professor of Medicine.
**Associate Professor of Medicine.
***Professor of Research Medicine.

FACULTY NEWS

James Arthur Cutter, M.D., former associate professor of anesthesiology at the University of Buffalo, is a new associate professor and vice-chairman of the Department of Anesthesiology at the University of Oklahoma School of Medicine.


CUTTER

Other recent additions to the full-time faculty include J. T. Jabbour, M.D., assistant professor of pediatrics and neurology, and Marshall Edelson, M.D., assistant professor of psychiatry.

Doctor Cutter is a 1951 graduate of Washington University School of Medicine. He interned at Percy Jones General Hospital, Battle Creek, Michigan, and took residency work at Brooke General Hospital, San Antonio, Texas. The anesthesiologist was on the Buffalo faculty four years, during which he also was associate director of anesthesiology at the E. J. Mayer Memorial Hospital, Buffalo.

Doctor Jabbour, a graduate of the University of Tennessee College of Medicine, succeeds Lucius Waites, M.D., now of Southwestern Medical College, Dallas, as associate director of the Birth Defects Center at Children's Memorial Hospital. After interning at Baylor University Hospital, Doctor Jabbour was in general practice three years before taking a pediatric residency at the University of Tennessee and then pediatric neurology training at the University of Minnesota. He was co-director of the Pediatric Neurology and Pediatric Seizure Clinic at Minnesota.


EDELSON

Doctor Edelson received a Ph.D. in 1954 and an M.D. degree in 1955 from the University of Chicago. The psychiatrist interned at Presbyterian Hospital, Chicago, and completed a residency at Sheppard and Enoch Pratt Hospital. Before coming here he was a captain in the U.S. Army Medical Corps, assigned as psychiatrist to the U.S. Disciplinary Barracks, Fort Leavenworth, Kansas.



AMA 15th CLINICAL MEETING

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DENVER NOV. 26-30

Denver—the hub of the Rocky Mountain states and air-rail-auto crossroads of the West—plays host to the nation's physicians next November by presenting the most vital, timely, and varied scientific program ever assembled at a winter clinical meeting.

Nothing in medicine is so new that you won't find it discussed or exhibited in Denver. *Planned just for you—the physician in practice*—a five-day session headlined by many of the nation's leading medical authorities offering a blending of "refresher" education with the most advanced knowledge, tools and techniques developed in recent research.

The entire scientific program is scheduled in one convenient location, Denver's Municipal Auditorium. Here are but a few of the many topical highlights:

PANEL DISCUSSIONS

Influence of Heredity on Disease
New Developments in Virology
Space Research—Impact on General Medicine
American Habits vs. Health
Advances in Chemo- and Radiotherapy
Suicide—Causes and Prevention
Medical Computers and Electronics
Radiation Accidents and Injury
Sunlight and Skin Care



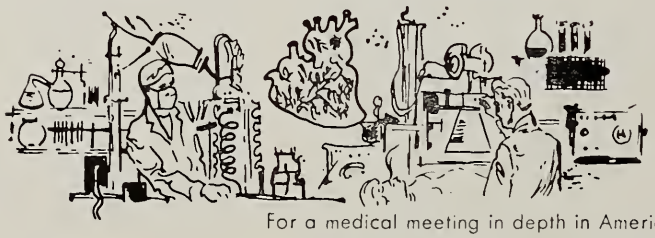
BREAKFAST MEETINGS

Community Psychiatric Care
Malmstrom Vacuum Extraction
Diagnosis in Pulmonary Surgery
Pyelogram Clinics
Poison Control Centers
Dermatology Quiz Sessions





- **MEDICAL MOTION PICTURE PREMIERES**
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For a medical meeting in depth in America's highest city

DECIDE NOW—IT'S DENVER IN NOVEMBER

See JAMA October 14 for complete scientific program for physician advance registration and hotel reservations

American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.



Report of Board of Trustees Meeting

In the first meeting since last Spring, the OSMA's Board of Trustees held an eventful four-hour session at the headquarters building on October 22nd. Highlighting the full agenda were such topics as: A medical education encouragement program; financial aid to medical students; Blue Shield coverage for physicians; and, fiscal reorganization of the OSMA.

More and Better Students

R. R. Hannas, M.D., Sentinel, Chairman of the OSMA's Council on Professional Education, gave a progress report on the association's program to attract the state's top students into the field of medicine. Termed "Medical Education Encouragement," the program was officially approved at last Spring's House of Delegates meeting, and was referred back to the Medical School Liaison Committee for implementation.

Doctor Hannas reported that the committee had met twice during the summer to develop specific plans to reach qualified highschool students and inform them about the profession of medicine. A folder entitled "Picture Yourself As A Future M.D." was prepared by the committee and OU Medical School officials, and is now ready for distribution, he said.

The Trustees were asked to appoint physician-counsellors for the highschools in their districts, who will appear before science clubs, answer questions about medicine as a career and distribute the folder (related article, page 610).

Doctor Hannas also reported that the Postgraduate Education Committee has planned eight decentralized postgraduate courses, the first of which is scheduled for Bartlesville on November 21st (related article, page 612).

Medical Student Aid

Trustees heard another progress report from Past-President Walter E. Brown, M.D., Chairman of the Financial Aid to Education Committee. Doctor Brown brought them up to date on committee plans to implement a House of Delegates directive calling for the establishment of a scholarship, grant-in-aid, and loan program for students at the University of Oklahoma School of Medicine.

He reviewed the House of Delegates action (May, 1961), which raises OSMA dues $5 per year to finance the program, then outlined and received approval on current committee plans to put the program into effect.

It was brought out that the dues increase would raise about $8,000 annually which, when split according to the formula laid down by the Delegates, would make about $3,200 available for scholarships and grants, and about $4,800 available for loans. Doctor Brown said the committee had agreed on the following definitions and stipulations applicable to the three categories of financial assistance:

- **Scholarships:** Monetary, nonrefundable awards to students based upon academic excellence (Five $500 scholarships to be offered to freshmen each year).
- **Grants-In-Aid:** Monetary, noninterest bearing grants to students based upon economic need, repayable on a voluntary basis ($600-700 available annually for such emergency purposes).
- **Loans:** Monetary assistance to students, refundable under the terms and interest rates set forth by the Delegates (Repayment must begin within five years of graduation and must be completed three years after it commences; 3% interest annually, beginning one year after graduation).

Doctor Brown concluded his progress report by stating that the committee agreed to have all applications for assistance (now being accepted for '62 class) processed through the OU Associate Dean of Student Affairs, with the OSMA committee responsible for final approval.

The Board of Trustees recommended that the present committee, comprised of the OSMA President, President-Elect, and immediate three Past-Presidents, continue to function until the 1962 annual meeting, at which time a more official provision could be made for continued supervision of the program.

Blue Shield for Doctors?

In another major action, Frank J. Nelson, M.D., Chairman of the Prepaid Medical Care Committee, reported that the majority of his group had recently voted to resubmit the question of making Blue Shield coverage available to physicians on a voluntary basis (similar proposals have been traditionally turned down by OSMA policy-making bodies).

The Board of Trustees was unanimous in once again denying official sanction to the proposal, reiterating its long-standing policy that physicians should continue to offer complimentary professional services

to each other and to the immediate families envolved.

As a follow-up to a previous Board action, Mark R. Johnson, M.D., Secretary-Treasurer of the OSMA, reported the results of a study of association fiscal policies and procedures, conducted in cooperation with a firm of certified public accountants.

Fiscal Reorganization

Johnson prefaced his remarks by stating that the purpose of the study was to keep bookkeeping, budget and audit procedures abreast of the growth of the organization; that it was not intended to cast criticism on past performance.

The report recommended sweeping changes in the fiscal setup, to include new bookkeeping and budget-planning methods, to provide for comprehensive audits of association financial records and to insure a more definite separation and accountability of Journal and membership dues funds. Also included in the report was a recommendation to change the association's present plans for accumulating reserves by diverting a portion of surplus funds into a trust fund, the earnings from which would be used in connection with the Financial Aid to Education Program.

Doctor Johnson was congratulated by the Trustees for the thoroughness of the report. It was pointed out that some of the recommended changes, however, would require House of Delegates action. Although it was recognized that most of the recommendations could be placed in effect administratively, action on the report was tabled on the basis that the policy changing portions were within the province of the House of Delegates.

Other Actions

In other actions, the Board:

- Approved continued sponsorship of two essay contests: AAPS and "Employ the Handicapped."
- Ratified the appointment of C. B. Dawson, M.D., Oklahoma City, to the Editorial Board.
- Learned the Oklahoma Poison Information Center was discontinuing service, and asked the Medical School Liaison Committee to investigate.
- Heard comprehensive reports of the New York AMA meeting from Oklahoma's Delegates and Alternates.
- Heard reports from Rex Kenyon, M.D., Chairman of the Annual Meeting Program Committee, and from R. Q. Goodwin, M.D., Chairman of the Council on Public Policy.
- Paid tribute to C. C. Young, M.D., deceased Trustee from Shawnee, and welcomed his replacement, Francis Davis, M.D., Shawnee. □

Influence of Heredity On Disease Topic For AMA Meeting

A study of heredity as it relates to human ills will be presented as a feature of the 15th annual clinical meeting of the American Medical Association November 26-30 at Denver.

Geneticists are rapidly advancing fundamental knowledge in this highly important medical field. This new knowledge will be passed on to clinicians for their guidance in practice.

"Genes, Chromosomes and Human Disease" will be the general subject of the section, under chairmanship of Leroy J. Sides, M.D., of Denver.

Theodore T. Puck, Ph.D., head of the department of Biophysics at the University of Colorado, will relate some of his new research findings in a paper entitled "The Gene and the Protein Molecule."

Other topics will include "Genes and Chromosomes," by David M. Bonner, Ph.D., University of California biologist; "Hereditary Aspects of Disease," by Walter Burdette, M.D., Salt Lake City; "Hemoglobinopathies," by Max Wintrobe, M.D., Salt Lake City.

John H. Talbott, M.D., of Chicago, editor of the Journal of the American Medical Association, will deliver a paper on "Gout" as a part of this section.

Much has been learned by the specialists in space medicine that will be of value to the practicing physician in treating patients who seldom get off the ground. This knowledge also will be presented in a section on space medicine at the meeting.

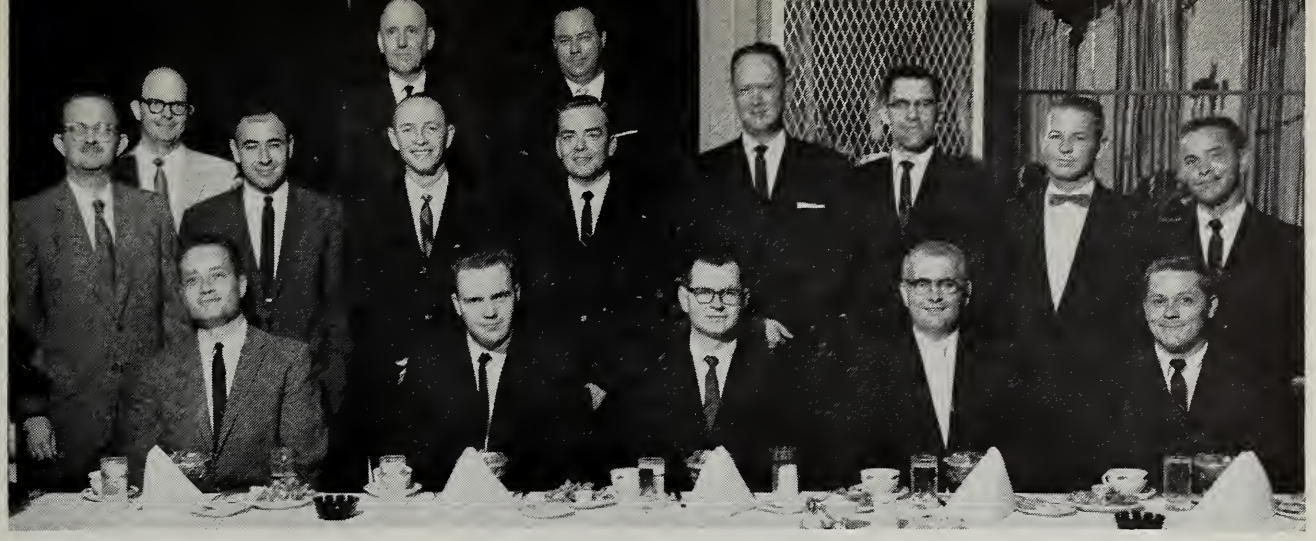
"The Impact of Space Medicine Research on General Medicine" will be presented by Hubertus Strughold, M.D., Ph.D., advisor for research to the commander, Aerospace Medical Center, Brooks Air Force Base, Texas.

Other space medicine topics will include "The N.A.S.A. Program in Life Sciences," by Brig. Gen. Charles N. Roadman, deputy director of the life sciences division of the National Aeronautics and Space Administration, Washington; "The Air Force Program in Aerospace Medicine," by Maj. Gen. Oliver K. Niess, surgeon general of the U.S. Air Force, Washington, and "Space Radiations: Their Physical Characteristics and Biological Implications," by Col. Gerrit L. Hekhuis, chief of radiobiology, School of Aerospace Medicine, Brooks Air Force Base.

An interesting series of papers will be presented at special breakfast programs November 28-29. Topics for the November 28 breakfast session will be "The Malmstrom Vacuum Extractor in Obstetrics;" "A Pyelogram Clinic," and "The Operation of a Poison Control Center." On November 29 topics will be "Community Care of Psychiatric Patients vs. Prolonged Institutional Care;" "Dermatology Quiz Session," and "Unusual Diagnostic Problems in Pulmonary Surgery."

A series of color television programs during the meeting will include such subjects as "The Art of Psychiatric Interviewing," "Resuscitation of the Newborn," "Total Abdominal Hysterectomy," "Primary Dermatologic Disorders" and "Dermatologic Manifestations of Systemic Disease."

Also scheduled is an outstanding program of medical motion pictures to be screened daily. □



Tulsa Welcomes New Members, Honors Seniors

Sixteen newcomers to practice in Tulsa County are seen above at the Annual Indoctrination Dinner for New Members of the Tulsa County Medical Society, held October 9th at The Mayo Hotel, Tulsa.

Seated, left to right, are: Paul A. April, M.D., internal medicine and rheumatic diseases; Ned T. Harney, M.D., internal medicine; James D. Green, M.D., internal medicine; Donald W. Bobek, M.D., surgery; and Bill F. Hutchins, M.D., obstetrics and gynecology.

Middle row, left to right: Thomas R. Cox, M.D., pathology; Roger Ray Paul, M.D., internal medicine; William M. Moore, M.D., internal medicine; Robert B. Williams, M.D., obstetrics and gynecology; Henry P. Hare, Jr., M.D., psychiatry; Frank A. Clingan, M.D., surgery; Paul C. Kemmerly, M.D., anesthesiology; and Melvin R. Swafford, M.D., anesthesiology.

Back row, left to right: David D. Paulus, Jr., M.D., radiology; Samuel B. Leslie, M.D., ophthalmology; and W. Pat Fite, Jr., M.D., plastic surgery.

Not present when the photograph was made were Walter H. Gary, M.D., radiology; C. Robert Cooke, M.D., internal medicine; John William Ward, M.D., surgery; and John A. Coates, M.D., neurological surgery.

Pavy and White Honored

Also honored were two senior members of the Tulsa County Medical Society.

Doctor Chester A. Pavy, veteran Tulsa ophthalmologist (center, below), is seen as he receives a gold pin from the Oklahoma State Medical Association in recognition of the completion of 50 years of active practice of medicine. Making the presentation is Doctor Walter E. Brown (left) of Tulsa, immediate Past-President of the OSMA. Doctor Pavy also received a certificate of Life Membership.



Doctor N. Stuart White, retired Tulsa surgeon, is seen at right. Doctor White was presented a certificate of Life Membership.

Doctor Pavy graduated from Indiana University College of Medicine in 1911. He practiced until 1927 at Terre Haute, Indiana, at which time he took two years of specialty training in ophthalmology and otolaryngology at the Chicago E.E.N.T. Hospital and the University of Vienna. He entered practice in Tulsa in 1929. Doctor Pavy retired earlier this year.

Doctor N. Stuart White, a graduate of the University of Oklahoma School of Medicine, Class of 1921, practiced at Sand Springs before moving to Tulsa in 1925. One of Tulsa's most active surgeons, he retired in January of this year.

Guest speakers at the Annual Indoctrination Dinner included Mr. Jack Rue Coleman, professional medical management consultant of Dallas, Texas; Doctor Mark R. Johnson, Secretary-Treasurer, Oklahoma State Medical Association, Oklahoma City; Doctor Frank J. Nelson, Past-President, Tulsa County Medical Society, and Doctor Wendell L. Smith, President, Tulsa County Medical Society. Doctor R. W. Goen, Chairman of the Medical Precepts Committee, presided.

Guests included Doctor Clinton Gallaher of Shawnee, President, and Mr. Don Blair, Oklahoma City, Associate Executive Secretary, Oklahoma State Medical Association. There were 103 physicians present. □

Medical Education Gets Plug From OSMA

Oklahoma medicine will no longer take a back seat to industry in its quest for the state's top students. A "medical education encouragement" program was launched October 22nd, when R. R. Hannas, M.D., Chairman of the OSMA Council on Professional Education, announced to the Board of Trustees that a comprehensive program was ready for implementation.

The idea for such a program was born last Spring under the direction of the Medical School Liaison Committee, Gregory E. Stanbro, M.D., Chairman, and was officially approved by the House of Delegates in May. Hannas, representing the Council and the Committee, told the Trustees how the program will work and requested their cooperation.

Each Trustee was asked to appoint a physician pre-med counsellor for each highschool in his district. These counsellors are to appear before pre-med and science clubs for the dual purposes of discussing medicine as a challenging vocation, and outlining admissions policies and procedures at the University of Oklahoma School of Medicine.

"We are living in an age of intense competition for the more talented students," Hannas said, "and industry has been dipping into the quantity and quality of students available for medical education."

Physicians participating as highschool counsellors will be armed with reference material on medical education and will be supplied with ample quantities of a special folder entitled "Picture Yourself As a Future M.D." The folder, prepared by the Medical School Liaison Committee and the University of Oklahoma School of Medicine, will provide each counsellor with the text of his presentation to highschool groups, and may also be used as hand-out material for prospective medical students.

In the interest of informing *all* OSMA members of the *current criteria* of medical school admissions policies, the Medical School Liaison Committee requested that the full text of the folder be printed in the *Journal*. It is hoped that all physicians, regardless of whether they are serving as highschool counsellors, will assist in attracting top-talent into medical education.

"Picture Yourself As A Future M.D."

"M.D."—wouldn't *you* be proud to have these special initials after *your* name?

To the world they mean you are a member of the most challenging, respected, exciting and dynamic of all professions . . . and, most importantly, the degree "M.D." marks you as a person whose whole life is devoted to serving mankind.

You who are now in highschool or in your early college years are perhaps wondering about the selection of an inspiring career. If so, consider the profession of medicine—a profession which offers unlimited opportunity for those who—

- *Have a strong desire to help others,*
- *Are anxious to keep abreast of rapid scientific developments, and*
- *Are curious to probe the still unsolved mysteries of human life.*

American Medicine needs such high caliber men and women to help meet the challenge which the future holds.

A growing population, greater diversity of work opportunities for physicians, and tremendous progress in medical science are creating an increasing demand in America for even greater numbers of highly trained doctors of medicine. Toward this goal—a goal of maintaining the world's highest health standards for Americans—the Oklahoma State Medical Association and the University of Oklahoma School of Medicine are dedicated.

As an Oklahoman, you are fortunate to have one of the nation's recognized medical schools right at your doorstep. You undoubtedly have many questions concerning the school and medical education in general. This pamphlet is designed to answer them. The other question—your decision to serve mankind—is up to you!

"Facts About Medical Education in Oklahoma"

Q—Who is eligible to apply for admission to the University of Oklahoma School of Medicine?

A—A student who can present a minimum of 90 semester hours of work, exclusive of physical education and military science, from an accredited liberal arts college and have within those 90 hours at least 34 in the prescribed fields of general chemistry (8 hours), organic chemistry (4 hours), physics (8 hours), biology (8 hours) and English (6 hours).

Q—What is the required grade average?

A—The student must complete his college work with a 1.5 (B minus) average in the prescribed fields above. He must have a 1.5 overall average, with at least a 1.0 (C) in each of the above subjects. (In calculating the numerical grade average, an A is converted to three points, a B to two points, a C to one point, a D to zero points, and an F to Minus-one point for each semester credit.)

Q—When a student repeats a course in order to improve his standing in college, will the better grade be counted for medical school application purposes?

A—Yes. If a course in which he made a D or F is repeated, the new grade will be substituted in calculating the grade average for interview and possible admission purposes.

Q—When may a student apply for admission to medical school?

A—During 1961, the dates for receiving applications are July 1 through December 1. This period may be extended in the future. Applications are made to the Associate Dean in charge of Student Affairs. They are processed as received and students are notified to report to the School of Medicine for an interview.

Q—When and how are the interviews conducted?

A—The Admissions Board begins interviewing applicants in September. The nine-member board is divided into three interview teams, each with three members. Normally each team interviews an individual, but on occasion an applicant may meet with one, two or all three teams, or he may be asked to meet with the entire Board. Finally, the Board meets as a whole to discuss and evaluate the applicant.

Q—What factors other than the required grade average are taken into consideration by the Board?

A—(1) Results of the Medical College Admission test.

(2) The premedical advisor's letter of evaluation.

(3) The board's impression of the student and his performance at the time of the personal interview.

Q—What is the Medical College Admission Test?

A—This examination is given twice annually (in the spring and fall) at selected schools in each state under auspices of the Association of American Medical Colleges. College faculty advisors are informed of the dates and locations. The examination is divided into four sections: Tests of verbal and quantitative ability aimed at measuring the capacity to learn; a test of general knowledge of the humanities and social sciences; a test measuring understanding of the basic principles of biology, chemistry and physics.

Q—What action does the Board of Admissions take following evaluation of the applicant?

A—The student may be offered a place in the next year's class, deferred for later consideration, or rejected. All offers for a place in class are made contingent upon the student satisfactorily completing all requirements for admission within the time allocated.

Q—When is the applicant notified whether he will be offered a place in the next entering class?

A—Interviews are generally held on Saturdays and notifications are mailed out on the following Monday. The student usually will know the decision of the board by Tuesday or Wednesday following the Saturday interview.



New OSMA Folder

Q—Who composes the Admissions Board?

A—The Board is made up of medical school faculty members chosen from a roster of those who indicate a wilingness to serve. Names are selected from this roster in ballotting at a general faculty meeting. The Dean in turn selects new members from the list of those receiving the greatest number of votes by the faculty. The appointments are approved by the University of Oklahoma Regents. A balance of full time and part time faculty members, preceptors and visiting lecturers is maintained.

Q—How should the high school student prepare for the study of medicine?

A—The best preparation is a grounding in the fundamentals required for admission to a liberal arts college. A variety of courses in the sciences and humanities will help develop the intellectual curosity, objectivity, judgment and habits of learning that are basic to medical education.

Q—What state colleges and universities offer the education required for medical school admission?

A—All accredited senior colleges of the State of Oklahoma offer a premedical curriculum. Virtually all are represented in the present enrollment of the School of Medicine.

Q—What is the cost per year of attending the University of Oklahoma School of Medicine?

A—Tuition is $500 a year for in-state students; $1,000 for out-of-state students. The average total cost for four years of medical school (all expenses) is between $9,000 and $10,000.

Q—What Financial assistance is available to a medical student and where does he seek such help?

A—Several loan funds are available. Some are administered through the University of Oklahoma at Norman and others by the School of Medicine. The latter includes funds contributed by the Oklahoma State Medical Association.

Beginning this year, a few scholarships also will be offered. OSMA members will begin contributing to a scholarship fund in 1962, and the Avalon Foundation has awarded the medical school a one-time grant to provide a number of scholarship awards.

Requests for information about loans or scholarships should be addressed to the Associate Dean of Student Affairs, University of Oklahoma School of Medicine, 800 Northeast 13th Street, Oklahoma City, Oklahoma.

Q—How many students are admitted to the School of Medicine each year?

A—Officially the school is authorized to accept 100 for each entering class. However, in recent years the University Regents have permitted the school to accept 104 in an attempt to maintain the allowable class size in the face of early attrition.

Q—Briefly, what does the medical

(Continued on Page 614)

Four PG Courses Slated For November, December

The Council on Professional Education's postgraduate program will get underway this month when the first two decentralized refresher courses are offered in Bartlesville on November 14th, and Enid on November 28th. Six other courses are scheduled for the balance of the year in the following locations: Chickasha (December 5th), Burns Flat (December 19th), Ardmore (January), Ada (February), Western Hills (March), and Miami (April).

In keeping with the concept of the refresher series, the meetings will be devoted to principal organ systems of the body. Programs arranged through December include: "The Liver," scheduled for Bartlesville, "The Lung," slated for Enid, "The Kidney" for Chicaksha, and "The Liver" for Burns Flat.

The courses will follow the same general format: two hours of instruction, approximately one hour for dinner, followed by an additional hour of instruction and an hour for discussion. AAGP has approved all such courses for four hours credit, Category 1. Scientific presentations will feature basic science, diagnostic and therapeutic considerations of the organ system.

Instructors and their topics for "The Liver" course are: G. Rainey Williams, M.D., "Anatomy" and "Surgery in Liver Disease"; Jack D. Welsh, M.D., "Metabolism" and "Liver Disease in Childhood"; Lee Honska, M.D., "Hepatic Function" and "Jaundice During Pregnancy."

Case presentations on cirrhosis with ascites, postop gallbladder disease, hepatic coma, and esophageal varicies will also be offered.

"The Lung" will feature the following instructors and topics: Charles W. Harvey, M.D., "Pathophysiology of Emphysemia"; Gilbert S. Campbell, M.D., "Respiratory Acidosis"; Harold G. Muchmore, M.D., "Recent Advances in Viral Respiratory Diseases"; and, Warren L. Felton, M.D., "Surgical Complications of Pulmonary Infections." A case conference will also be presented.

"The Kidney" course will have the following program: John Drake, M.D., "Renal Functions"; Robert L. Lindeman, M.D., "The Kidney and Electrolytes"; John P. Colmore, M.D., "Pyelonephritis." In addition, a panel on "Acute Renal Failure" will be presented and problem cases discussed.

The Bartlesville meeting ("The Liver") will be held at the Elks Club, 4:30 p.m., November 14, under the local direction of Elvin M. Amen, M.D. Enid's meeting ("The Lung") will begin at 4:30 p.m., November 28th, at the Oakwood Country Club, with Clarence R. Roberts, Jr., M.D., in charge. On December 5th, Chickasha's meeting ("The Kidney") will be held at 4:30 p.m. in George's Steak House, B. C. Chatham, M.D., in charge. The December 19th meeting ("The Liver") will be held at 4:30 p.m. in the Officer's Club, Clinton-Sherman AFB, Burns Flat with R. R. Hannas, M.D., handling local arrangements.

Registration fee for all meetings is $7.50, and includes dinner. □

Publications Available

The OSMA Executive Office, Box 9696, Oklahoma City, has two publications in stock for order by physician members.

Reprints of the special May *Journal,* "Disaster Medical Care" are available in limited numbers. Physicians may wish to distribute the magazine to key people in their local civil defense organization.

Another publication, the AMA's new booklet, "The Cost of Medical Care" is ready for distribution on order from county medical societies or individual members (two per member). It's an interesting statistical analysis of the health dollar as compared to other living costs.

Cancer Seminar on Tap for December

"What's New in Cancer?—1961" will be the theme for the Ninth Medical and Scientific Session of the American Cancer Society, Oklahoma Division, to be held in Oklahoma City's Huckins Hotel, December 2, 1961.

Following registration, the day-long meeting will open scientific presentations at 9:00 a.m. A general question and answer period will follow morning and afternoon lectures.

Topics to be discussed by four guest lecturers will be: "Some General Features of Cancer in the United States" and "Smoking and Lung Cancer" by Michael B. Shimkin, M.D., Associate Director for Field Studies, National Cancer Institute; "Duration of Human Cancer Prior to Diagnosis" and "Diagnosis and Treatment of Lymphomas" by Vincent P. Collins, M.D., Department of Radiology, Baylor University College of Medicine, Houston; "Colon Polyps in Relation to Carcinoma of the Colon" and "Thyroid Nodules in Relation to Carcinoma of the Thyroid" by Jonathan E. Rhoads, M.D., Chairman of the Department of Surgery, University of Pennsylvania School of Medicine, Philadelphia; and "Diagnosis and Management of Early Pelvic Malignancies" and "Pelvic Malignancies During Pregnancy" by Harry M. Nelson, M.D., Department of Obstetrics and Gynecology, Wayne State University, Detroit. □

Beds Influence Rates

The number of hospital beds is "The factor which, probably more than any other," determines the rate of hospital utilization in any community, state or nation," said Milton I. Roemer, M.D., Sloan Institute of Hospital Administration, in the November 1st issue of **Hospitals.**

As the number of beds increase, utilization goes up, Doctor Roemer said, but observed that this phenomen does not imply abuse since former facilties might have been inadequate. His answer? Research to determine "true need" for beds in a given situation. □

Overhead Expense Policy Approved

OSMA's Council on Insurance has authorized its agent, C. L. Frates and Company, to market a group insurance plan to protect association members against overhead expenses while they are disabled and unable to practice. Written by the Continental Casualty Company, successful bidder, the program will be immediately available upon individual request, and a statewide promotion of the coverage is scheduled for next spring in conjunction with the annual servicing of the OSMA's Accident and Health Program.

Overhead expense protection is a comparatively new idea in arranging proper insurance protection when a disabling illness occurs. A physician's income is channeled in many ways, but much is needed to pay the expenses of his practice—such as rent, salaries, telephone and utilities. These items are covered by overhead expense insurance.

Thus, a physician may purchase health and accident insurance to cover his loss of income due to disability, and may further protect himself by having overhead expense insurance to cover professional expenses. With overhead expense protection, he will not have to relinquish an established address, discharge valuable employees, or sacrifice tools of trade.

A maximum benefit of $1,000 per month is provided for each separated period of disability beginning thirty days after disability occurs (waiting period) and extending to eighteen months. The only exclusions in the policy are disabilities caused by pregnancy, attempted suicide, disability as a pilot of a private aircraft, war and military service. Premiums paid for this type insurance are tax deductible as a business operating expense.

All practicing members in good standing of the Oklahoma State Medical Association, under the age of 70 years old, are eligible for the coverage. C. L. Frates and Company's agents are now ready to supply information. □



Grady County Physician Honored

Rebecca H. Mason, M.D., Chickasha, was twice-honored at a recent meeting of the Grady County Medical Society when OSMA Trustee, J. B. Miles, M.D., Anadarko, (pictured with Doctor Mason in left photograph) presented her with a Certificate of Accomplishment.. The other award, an Honorary Life Membership in the Oklahoma State Medical Association, was made by Harvey D. Elkouri, M.D., Chickasha, President of the Grady county society (pictured in the right photograph).

Your Journal Rated Best

The *Journal* of the Oklahoma State Medical Association was judged the nation's finest state medical publication at the 1961 State Medical Journal Conference, held October 30, 31, in Chicago.

At the meeting sponsored by the State Medical Journal Advertising Bureau, Oklahoma's magazine bested the competition of 34 publications for its cover design, typography, content, quality of production and overall impression. Judging the journals, and on hand to make the award, was nationally-known typography expert, O. M. Forkert, President of Forkert, Blome and Associates, Inc., Chicago.

Second and third places in the judging went to the Nebraska State Medical Association Journal and the Rocky Mountain Medical Journal, respectively. Oklahoma received a score of 93½ out of the 100 possible in Forkert's rating system.

The conference, held every two years by the SMJAB, a national advertising sales agency for the state publications, was attended by about one hundred editors and staff representatives of the state medical associations. In addition to the competition, the conference program featured educational presentations on the function, editorials, medical writing and business management of medical journals.

Oklahoma's Editorial Board is comprised of Ben H. Nicholson, M.D., Editor, John G. Matt, M.D., and C. B. Dawson, M.D. Louise Martin and Don Blair are staff representatives. The *Journal* is printed by the Transcript Press, Norman, Oklahoma. □

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DEATHS

MYRON C. ENGLAND, M.D.
1906-1961

A native of Salida, Colorado, Myron C. England, M.D., 55-year-old Woodward physician, died on August 22, 1961.

Since his graduation from the University of Oklahoma School of Medicine in 1936, Doctor England had spent 25 years in the practice of his specialty, EENT, in Woodward.

He was a Fellow of the American Academy of Otolaryngology and Rhinology and a Diplomate in the American Board of Otorhinology.

During World War II, Doctor England served four and a half years in the South Pacific. He had continued active service in the Army Reserve and held the rank of Lieutenant Colonel.

Interested in both civic and medical affairs, he had been secretary for the Northwest Counties Medical Society for many years. □

JACK O. AKINS, M.D.
1910-1961

Tulsa urologist, Jack O. Akins, M.D., 51, died August 19, 1961.

Born in Hartshorne, Oklahoma in 1910, Doctor Akins graduated from the University of Arkansas School of Medicine in 1939. During World War II, he served with the 36th Army Division. In 1945, he established his practice in Tulsa.

Doctor Akins was a member of the Southwestern Urological Association. □

JOHN F. GORRELL, M.D.
1881-1961

A Life Member of the Oklahoma State Medical Association, John F. Gorrell, M.D., died in Tulsa, October 11, 1961.

Born in Hebron, West Virginia in 1881, Doctor Gorrell graduated from the University of Pennsylvania School of Medicine in 1908. After two years of practice in Homestead, Pennsylvania, he came to Tulsa where he specialized in EENT.

Active in medical and civic affairs, he served as President of the Tulsa County Medical Society in 1930.

After being awarded his Life Membership in the state association in 1957, Doctor Gorrell was again honored in 1959 when the association awarded him a 50-Year-Pin in recognition of his service to the profession. □

WARREN T. MAYFIELD, M.D.
1895-1961

Warren T. Mayfield, M.D., 66-year-old former Oklahoma physician, died in Norman, October 22, 1961.

A native of Norman, Doctor Mayfield graduated from the University of Oklahoma School of Medicine in 1920 and the following year established his practice in Norman. He remained there until his retirement in 1953 when he moved to Winslow, Arkansas.

A veteran of World War I, he was active in civic as well as medical affairs. A Past-President of the Cleveland County Medical Society, he had served as a Councilor to the Oklahoma State Medical Association.

Recognizing his years of service to the medical profession, he was awarded an Honorary Life Membership by the Oklahoma State Medical Association in 1954. □

Medical Education . . .

(Continued from Page 611)

school curriculum include?

A—The first and second years (preclinical) include lecturers and laboratory courses in anatomy, biochemistry, microbiology, pathology, pharmacology, physiology and preventive medicine and public health. Introductory courses in various clinical fields are begun here, also.

In the third and fourth years (clinical) the student spends most of his time in the teaching hospitals, working with patients in the departments of medicine, surgery, pediatrics, gynecology and obstetrics, psychiatry, anesthesiology, and others. The subspecialties are taught also. There are approximately 20 departments with which the students come in contact during the four years of study. □

MISCELLANEOUS ADVERTISEMENTS

PHYSICIAN doing internal medicine desires to dispose of practice. Office located in prominent medical building in town of over 100,000 population in Oklahoma. Contact Key L, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

RECENTLY COMPLETED, and now leasing, beautiful new Midwest City medical building. Only one suite left. Contact Key O, The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City.

FOR SALE at bargain prices: lensometer (A.O.), projector (B & L), a opthalmoscopes (A.O.), sterilizer, perimeter, spot lamp, cuspidor, treatment cabinet, treatment table and treatment chair. Contact Mrs. J. J. McDonald, 4734 Dartmouth, Bartlesville, Oklahoma.

WANTED PARTNER or associate, with chance to eventually retire, for general practice in city. $20,000 income, average daily load 15-20, same location for 20 years. General practitioner, either recent graduate or middle age, who could do O.B. and minor surgery would do well. All records available. Mary Edna Sippel, M.D., 308 Utica Square Medical Center, Tulsa 14, Oklahoma.

SOUTHERN OKLAHOMA group desires young general practitioner for association, leading to partnership. Write Key B, The Journal, P.O. Box 9696, Oklahoma City, Oklahoma.

A WONDERFUL location in a beautiful new building. Space available for doctors offices. We will complete this to your desired specifications. Frank Richards Construction. MU 5-5597, Oklahoma City.

BIG SAVINGS ON "RETURNED-TO-NEW" and surplus equipment. Reconditioned, refinished, guaranteed. X-Ray, examining tables, Autoclaves, ultrasonics, diathermies, microscopes, OR tables, OR lights, and more. Largest stock in the Southwest. Used Medical equipment WANTED. TEX-RAY Co., 3305 Bryan, Dallas. (Open to the profession Wednesdays, Thursdays, 9-5. Other hours by arrangement.)

TALL TIMBER

In a fairly new state, one characterized often as blackjack and scrub oak country, too often we minimize the tall timber in our midst. While most Auxiliary members realize that Oklahoma had the first organized medical auxiliary, many are unaware that we also had the first Woman's Auxiliary to the Student American Medical Association.

Mrs. James P. Luton, president of Oklahoma County in 1955-56, appointed Mrs. James P. Bell as chairman of a committee to organize the wives of medical students. Their first president was Mrs. Charles Monnet.

When Mrs. George H. Garrison and Mrs. Earlene Simon flew to Philadelphia in 1957 to present plans for a national organization, many of us recall the enthusiastic report at State Convention that year: things were well on their way. This acorn was carefully planted; there are 47 national chapters now chartered.

When we talked with Mrs. Jack Harper, president of WA-SAMA at the University of Oklahoma School of Medicine, she mentioned with pride that Oklahoma is the only state consistently to have national officers. Mrs. Stanley Muenzler, former active member locally and nationally, now serves the organization as Executive Secretary in Chicago.

"It is impossible even to imagine being a student wife before our Auxiliary was formed," Mrs. Harper stated. She extended an invitation to Auxiliary (WA-OSMA) members to visit their meetings at any time. We might add: their meetings, as well as their enthusiasm, are exemplary for members of Medical Auxiliary.

Who are the wives of medical students, our doctors of the future? They are alert and intelligent women in their early twenties, most of them. Many have children. More often than not, they are dual-rolled, combining professional life with running a home. Regardless of national statistics to the contrary, in Oklahoma those wealthy medical students are in minority.

Professionally, medical students' wives are teachers, nurses, secretaries and typists, and technicians. Mrs. Harper says that in addition to the visible help given by the members of the Medical Auxiliary (sewing lessons, clothing and furniture bank, and homes for meetings) they are most appreciative of the interest of wives of doctors. This interest manifests itself in the introduction to, and preparation for, the years ahead. Through panels, speakers and programming, student wives have an opportunity to develop an awareness of the increasing demands upon the doctor and his family, to study medical legislation, to discuss the medical future.

When Doctor Askey delivered the convention address at National (reported fully in the September *Bulletin*), he emphasized the ten points which should be used as a guide for our working with each county medical society. Many members seem to be completely unaware of the existence or the significance of these ten points. We feel that by the time the members of WA-SAMA are eligible to become members of our organization, they will be already familiar with this background. It is an optimistic outlook. Those who helped form the group and those who have continued this interest should be proud of the Woman's Auxiliary to the Student American Medical Association.

POLL, ANYONE?

Pall or appall? What impression does the image-polling have on you and your husband? We consider the polls interesting, particularly since so many questions are being asked as a result of national coverage. Within the next few weeks, will you take the time to make your attitudes known? Briefly state why you consider pertinent points right or wrong; also include, please, your ideas about the role wives of physicians play in the public image of the doctor. A postcard or note will be fine, signed or unsigned, as you like. No attention will be paid to postmarks. So, if your opinion is influenced by the size of your community, please mention it. Address your opinion to Auxiliary News, OSMA, Box 9696, Okla. City. We look forward to our own poll—your ideas. □

OSMA JOURNAL / *the last word*

Want an Example of U.S. foolishness? Russia is permitted by postal regulations to send any quantity of uncensored communist youth propaganda to anyone in this country or its territories, most of it free of charge. Alert to the opportunity, U.S.S.R. sent 7 million pieces through New York City in one year, 171½ tons cleared San Francisco in a week and 38 other ports handled comparable loads.

Oklahoma's chapter of the American Association of Medical Assistants successfully promoted Oklahoma City as the 1964 meeting site for the national voluntary organization of 9,500 physicians' office assistants.

OSMA's Atoka-Bryan-Coal District Medical Society gave the state's "Medical Education Encouragement" program a boost on October 17th when the physicians hosted the premed students of Southeastern State College, Durant, to a dinner meeting. Presenting the program were Phil Smith, Sc.D., Associate Dean of Student Affairs, OU School of Medicine; James Garner, President of OU's Student AMA organization; and, Sam Pool, OU medical student from Durant.

Warnings have been issued by the manufacturers concerning prolonged use of triacetyloleandomycin (Cyclamycin — Wyeth Laboratories, Signemycin — Pfizer Laboratories, Tain—Dorsey Laboratories, and Tao, Tao-AC and Taomid—Roerig Laboratories).

There's an excellent new film strip soon to be available for county medical society or hospital staff meetings. Entitled "Careful, Doctor!" the film is produced by St. Paul Fire and Marine Insurance Company, OSMA's professional liability insurance carrier. It's a fifteen minute color-sound presentation on the most common causes of malpractice claims. Those interested should contact Gordon Fransen, state agent for St. Paul, Mercantile Building, Oklahoma City.

Rapid call-up of military reservists and National Guard units, plus the extension of some tours of duty, has caused a minor problem in the operation of the Medicare program, since some dependents of servicemen may be without up-to-date ID cards. In such cases, Blue Shield, Oklahoma fiscal administrator, suggests that the physician certify in writing his belief that the patient is eligible, or substitute "eligibility statement" from serviceman's CO.

Senators Bob Kerr and Mike Monroney and Representative Page Belcher were in Ponca City October 9th for the Kaw Dam Rally. Doctor and Mrs. E. C. Mohler held a reception for the legislators in their home, attended by all local physicians.

Just in case you didn't notice, the OSMA *Journal* won a top national award (page 613). Despite the honor, however, more local news is always needed: county society activities, news of deaths, honors to members, etc.

Miscellany. Samuel T. Moore, M.D., Oklahoma City, is the new President of the OU Medical School Alumni Association. . . . Ira Pollock, M.D., Oklahoma City, was named to the National Board of Directors, American Cancer Society. . . . Tulsa County OB-GYN Society elected the following officers: James T. Maddox, M.D., President, E. O. Johnson, M.D., President-Elect, Edwin R. Shapard, M.D., Vice-President, and Robert W. Dean, M.D., Secretary-Treasurer.

MEETINGS

November 14	OSMA PG Course ("The Liver") Bartlesville
November 26-30	AMA Clinical, Denver
November 28	OSMA PG Course ("The Lung") Enid
December 2	ACS Cancer Seminar, Oklahoma City
December 5	OSMA PG Course ("The Kidney") Chickasha
December 19	OSMA PG Course ("The Liver") Burns Flat

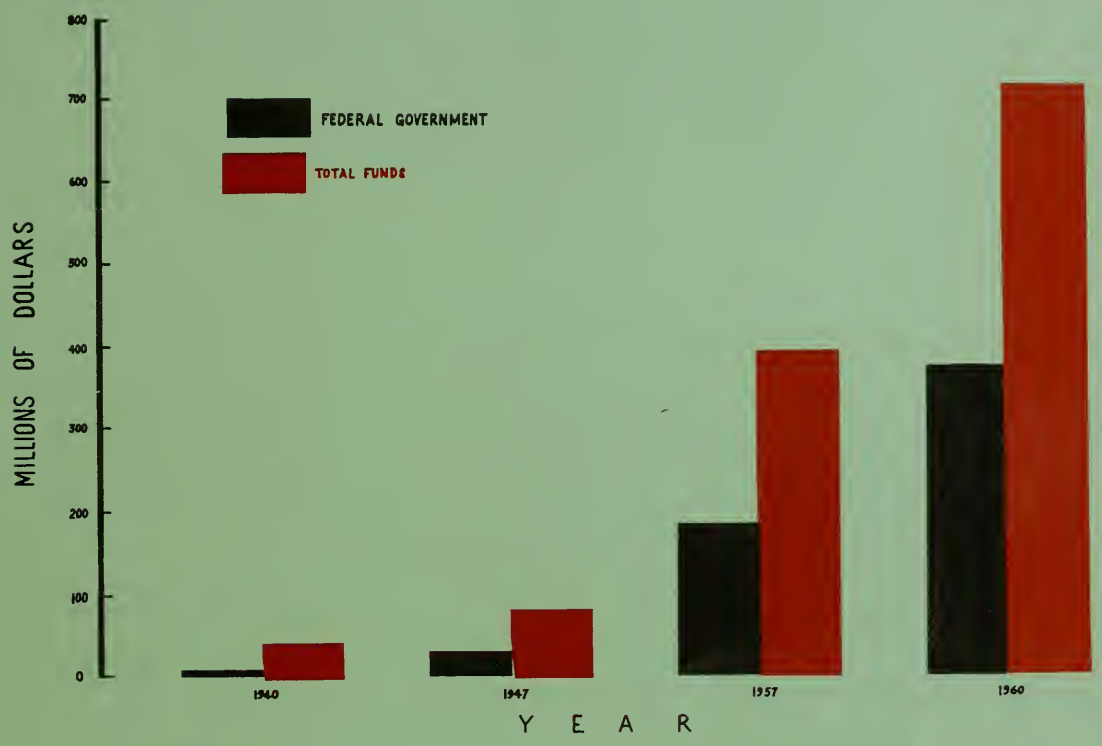
NEWSLETTER

OKLAHOMA STATE DEPARTMENT OF HEALTH

OKLAHOMA CITY, OKLAHOMA

November 1, 1961

GROWTH OF FUNDS FOR MEDICAL AND HEALTH RELATED RESEARCH



"Funds for Medical and Health Research"

1. In twenty years, funds available have increased from some $40,000,000 to over $700,000,000.

2. Over one-half of this latter sum is appropriated by the Federal Government.

3. A tremendous increase in health information has been a result. It is difficult to depict the impact of this new fund of knowledge. Certainly, no comparable twenty-year period exists in medical history.

4. However, funds for utilizing this new information in public health have not been forthcoming.

5. In Oklahoma, organized public health is operating with nearly one hundred fewer employees than in 1950.

6. Even modest increase in funds for public health would, wihout doubt, be returned many times over in prevention of illness and death.

The JOURNAL of the Oklahoma State Medical Association

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In oral penicillin therapy

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the effectiveness

of this...



with the safety

and the convenience

of this...



The Scientific Section

SOME OF THE departments at the school of medicine require a kind of thesis of the senior students. This issue of the *Journal* contains eight of them. A few more will be printed later. About ninety were screened by the Board of Contributing Editors and the Editorial Board then selected from those that were considered acceptable for publication as written. They are good papers and we question some of the criticisms that have been directed at the school. The one most often heard is "the student sees only the exotic and unusual, none of the every day stuff that he will later encounter."

A number of papers were considered unacceptable because they concerned the ordinary and pointed up nothing new. These were about inpatients, and he sees many more patients with every day complaints and conditions in the outpatient department. These papers, although about the unusual, indicate that the student is learning what he is supposed to learn—how to approach a problem, how to search the literature for help and confirmation, how to study, how to learn and how to apply to his thinking on a problem what he has learned. Remember he has an internship yet to do. □

The Fallout Shelter

HAVE YOU built one? Are you going to? What the doctor thinks is the proper thing to do has its bearing on the community. One person thinks it is a grievous sin to be warned of something and not take advantage of the warning—another has no notion of digging his own grave. The Government's point of view is that people must be saved so that we can continue to exist as a nation and prosecute a war. The individual's point of view varies from *I'll take my chances*, to, *I'll build me a shelter and shoot my neighbor and his children, if necessary, to keep him out.* What a head of steam we are building up! Could it be enough to believe that we ought to hurry up and get done with it? Surely not, but one wonders.

Reflect for a moment on Norman Cousins' Shelters, Survivals and Common Sense, which appears in the *Saturday Review*, October 28, even though one does consider a shelter a necessity and a must.

Mr. Cousins comments on the call for a militia of 5,000 by the head of a local civil defense committee of Las Vegas to protect against southern Californians who would invade Nevada like a "swarm of locusts"; on a Chicago suburbanite who intends to mount a machine gun at the entrance to his fallout shelter; on countless other Americans who are equipping their shelters with guns or tear-gas devices against their neighbors; on children being conditioned to accept psychologically the murder of their playmates; on the fact that in our society many accept that there is "nothing in the Christian ethic which denies one's right to protect oneself and one's family." He continues—

"People speculate on the horrors that would be let loose by nuclear war. It is not necessary to speculate on such horrors. Some of the worst horrors are already here. The transformation today of otherwise decent people into death-calculating machines; the psychological preconditioning for an age of cannibalism; the wholesale premeditation of murder and the acceptable conditions thereof; the moral insolence of those who presume to prescribe the circumstances under which it is spiritually permissible to kill one's neighbors; the desensitization of human response to pain; the acquiescence in the inevitability of disaster; the cheapening of human personality with its concomitant of irresponsible fatalism—all these are part of an already existing, fast-swelling chamber of horrors.

"It will be said that shelters and everything that goes with them are basic facts of nuclear war that do not disappear because we find them unpleasant. But this assumes there is no alternative. It assumes that everything has been done to prevent the holocaust from occurring in the first place. It assumes that we have no obligation to anyone except ourselves. Not until the individual declares a moratorium on the inconsequential in his life and invests himself fully in the effort to achieve a just and enforceable peace, indeed, not until the nation itself commits its moral energy, intelligence, and resources to a massive attempt to bolster the United Nations and give it appropriate powers of world law, however rigorous the opposition —not until these basic things are done is there warrant for defeatism. And even if these things are not done, there is never a warrant, social or spiritual, for cannibalism.

"If we are truly interested in safeguarding this nation and the human values that go with it, we will scrutinize

and memorize the nuclear facts of life. As a nation, we didn't fully understand the implications of these facts when we dropped the bomb on Hiroshima; we don't understand them yet. We have never quite comprehended that the use of such weapons constitutes a form of race suicide. It is impossible for any nation to wage nuclear war against another nation without also waging war against the human race. The winds are the conveyer belt of mass death. The nuclear gun contains three barrels: one is pointed against the enemy; a second is pointed against people who are not enemies; a third bends back completely and is pointed squarely at the holder.

"An American demonstrates his patriotism not by pressuring for nuclear showdowns or by fast-and-loose talk about dropping hydrogen bombs but by tapping and putting to work the deepest wisdom the history of man has to offer. A new kind of force must be created which, when fully used, can safeguard this nation and its freedom and make a contribution to world peace in general. Military power no longer can accomplish that purpose.

"President Kennedy's speech before the United Nations has the initial elements of that new kind of force. He made it clear that there is no security for anyone in a spiraling arms race; he called for total disarmament under adequate safeguards; he connected the need for disarmament to the need for establishing the institutions of world law; in short, he summoned the American people to a peace race. The full potential force of these words will be converted into a working program when the American people respond with depth and vigor. Earnest discussions among neighbors about their part in giving vital support to these ideals today may offer far more realistic protection for their families than shotguns for shooting down neighbors on a dreadful tomorrow.

"If the battle for sanity and against cannibalism is lost, it will not be because of the inexorability of history but because men became so fascinated with the face of death that they lost hold of the meaning of life and the power inherent in it to shape its destiny." □

Poison Information Center

THE *JOURNAL* is pleased to report that much progress has been made toward restoring this service to the physicians and people of Oklahoma. The Board of Trustees, at its last meeting, expressed concern and appointed R. R. Hannas, M.D., of Sentinal as representative of the association to see what could be done. Many mothers, teachers and nurses expressed dismay at the loss of this element of security. Physicians throughout the state were disturbed. The following letters from Kirk T. Moseley, M.D., State Commissioner of Health and Leo Lowbeer, M.D., pathologist for Hillcrest Hospital in Tulsa set out the position of things in this regard today.

* * *

November 20, 1961

To The Editor:

I am writing to you to give you some additional information in regard to the Poison Information Center.

The State Department of Health is interested in continuing the Poison Information Center and we feel sure we can secure from the Children's Bureau, Department of Health, Education and Welfare, the same amount of funds for the next year as they have had in the preceding year; however, this will leave us seeking for additional funds to continue the operation of the Poison Information Center.

All of the physical equipment of the Poison Information Center (files, desks, books, etc.) has been moved to the State Health Department Laboratory, and we hope to have the Center in operation in the near future.

Our proposed plan is to establish the Poison Information Center in the State Health Department and to operate it with the cooperation of the Department of Pediatrics, Oklahoma University Medical Center and the State Medical Association. In our proposed plan the Center would operate under the direction of the State Health Department Laboratory Director and a full-time Bio-chemist or Pharmacologist. This person will be employed to operate the Poison Information Center under supervision. He will also have laboratory facilities available to do certain analytical procedures that have not been performed in the past, or only partially done.

From past experience, we know that certain laboratory testing procedures are needed and this was not part of the Poison Information Center as operated by Dr. Shoemaker. The State Health Department Laboratories did cooperate with Dr. Shoemaker as far as we were able to do so, but we never had adequate personnel to carry on a good testing program.

A full-time secretary would be stationed in the Poison Information Center. It would

(Continued on Page 651)



To all members of the Oklahoma State Medical Association and the Oklahoma State Medical Association Auxiliary:

In appreciation of the many tasks that have confronted the profession in the past months, I want to express sincerely my own thanks to all who have worked in behalf of better health for the people of Oklahoma.

At this Yule Time Season, Mrs. Gallaher and I extend to each and all of you, our best wishes for a happy Christmas and a prosperous New Year.

Clinton Gallaher M. D.
President

OSMA JOURNAL/scientific

Case Report of Malignant Melanoma

KENNETH PLUMMER, M.D.

MALIGNANT MELANOMA is known to be one of the more uncommon neoplastic diseases. The experience which any individual physician has personally had with this lesion is usually not great. Indeed, a review of admissions at most hospitals usually discloses a fairly limited number of cases of melanoma for an entire institution. All series of cases, large and small, should be reported in the literature. In this way, perhaps the old concept that melanoma is the most lethal of cancers will be dispelled. The following is a case report of a patient with a highly malignant variety which resulted in her death.

History: A 47-year-old colored female was referred to the Medicine Clinic of the University of Oklahoma Medical Center on January 18, 1956. She complained of a nonhealing ulceration of the right wrist. A small 0.5 cm. black mole had been present in the hypothenar area of the right wrist since the patient could remember. About six months previously the patient had observed a hard core in the mole and tried to remove what she thought was a splinter. However, no foreign body could be found, and the mole became larger with small satellite pinpoint areas of pigment. The lesion gradually began to ulcerate, and within four months was about two cm. in diameter and bled when touched. She consulted her local physician, who treated the ulcer with an antibiotic ointment. This did not help, and the ulcer continued to enlarge. She denied any axillary or cervical masses. There were several other small moles on her face and body which she claimed had undergone no significant change. Past history was not remarkable, and she denied previous operations or serious illness. She had occasional frontal headaches relieved by aspirin. She had a congenital lateral deviation of the left eye. She denied cough, hemoptysis, or chest pain. She complained of occasional constipation relieved by various laxatives. She denied urinary changes and dark urine. There had been no similar disease in the patient's family or any other significant familial illness.

Physical Examination: The patient's weight was 227 pounds, temperature 97° F., pulse 82, blood pressure 150/92. She was well developed obese, and appeared otherwise healthy. Examination of the skin revealed a dark ulcerated lesion about 2 cm. in diameter on the right hypothenar eminence. Surrounding this were several, flat, smooth, black pigmented areas from 0.2 to 0.5 cm. in diameter. The lesion was not tender or inflamed. Several dark unremarkable moles were found about the face, chest, and back. There were no abnormalities about the head

and neck. The left eye had decreased vision and deviated laterally on forward vision. The fundi revealed mild A-V nicking, but there were no areas of pigmentation. There was no palpable lymphadenopathy in any area. The breasts were very pendulous but without masses or discharge. The lungs were clear to auscultation and percussion. The heart was not clinically enlarged and had a normal rhythm without murmurs. The abdomen was obese and non-tender. No mass or liver, kidney, or spleen was palpable. Pelvic examination revealed a small erosion of the anterior lip of the cervix, which did not bleed to touch. The back and extremities were not remarkable. Neurologic examination was within normal limits.

The patient was admitted to the hospital for biopsy of the lesion. The following laboratory data were obtained: Hb 12.0 gm. per cent, WBC 8,500 with normal differential, Blood type A+, Serology—non-reactive, Urinalysis—clear, pH 5, Sp. Gr. 1.015, protein negative, sugar negative, occasional WBC. Roentgenographic studies revealed a negative chest, normal heart, no evidence of lung or bony metastases, and normal abdomen. A Pap smear of cervix was reported as Class II. The pathologist reported the tissue removed from her wrist as malignant melanoma. At this time the patient was advised to have a wide local excision of the lesion followed by axillary dissection. Even though she was warned of the poor prognosis without operation, she elected to return home without treatment. About one month later the patient returned to the hospital requesting the operation which had been advised. Except for a small black lesion 3 cm. proximal to the original ulcer the physical examination was unchanged. Another survey for metastases was negative. On February 6, 1956 under general anesthesia the lesion was excised with wide margins including resection of the new extension. The resection extended down to the muscle fascia. After the specimen was removed, it appeared that no tumor was evident on its under surface. A split thickness graft was sutured into position over the defect. The pathologist reported the base and edges free of tumor. Ten days later the patient was returned to surgery for a right axillary dissection. Several small nodes were removed en bloc. These were reported as having a moderate number of macrophages with a black pigment in them. None had the appearance of being malignant and no anaplastic cells were observed. The diagnosis of the specimen was lymph nodes with melanotic pigment. It was thought that there were no regional or distant metastases. The post-operative course was uneventful, and on March 14, 1956 the patient was discharged to be followed closely for recurrence of the tumor. Roentgenograms were still negative; the urine was negative for melanin; and the hemogram was within normal limits. The patient was followed in the Surgery Clinic every three months during the first year with no evidence of recurrence. After this she was followed at six month intervals. Her last out-patient visit was in May 1959, at which time physical and radiologic examinations were still negative.

Some time in August 1959, the patient developed an intermittent left lateral chest pain, which was sharp and non-radiating. Her local physician told her she had fluid behind her lung and prescribed some medication for pain. In October she developed an upper respiratory infection with mild shortness of breath and a cough productive of white phlegm. In November she returned to Surgery Clinic with the following findings: increased dullness, decreased breath sounds, decreased tactile and vocal fremitus in the left base. Liver was palpable 2 cm. below the right costal margin and was firm and non-tender. Roentgenograms of the chest revealed a large density in the left hemithorax. Fluoroscopy of the chest revealed the mass which was nonpulsatile. The left diaphragm was also paralyzed. It was thought the patient had recurrence of the malignant melanoma in the chest which was inoperable. She was to be followed by her local physician with occasional follow-up visits to the Surgery Clinic.

The patient returned to the hospital in January (1960) with the following pertinent findings: there were no palpable lymph nodes, the primary area of the right wrist was unchanged, trachea was moderately deviated to the right, there were decreased excursions of the left chest, breath sounds absent in the left hemithorax, egophony in

the left chest and decreased tactile fremitus and dullness to percussion, liver was still palpable two fingers below the right costal margin, the heart was shifted to the right with the PMI at the xiphoid process.

Pertinent laboratory findings were as follows: Hb 7.5 gm. per cent, WBC 11,000, urine was dark with a positive test for melanin with the ferric chloride test, stools positive for melanin, BSP retention 13 per cent, pleural fluid cytology was compatible with malignant melanoma, sputum cytology was positive for melanoma, vital capacity was 78 per cent of normal, sternal marrow aspiration revealed diffusely scattered malignant cells.

The patient obtained some relief from a thoracentesis with the removal of 750 cc. of bloody fluid. However, within a few days the patient was again very dyspneic and a repeat thoracentesis was attempted but no more than a few cc. of fluid were obtained. She also was given 1,000 cc. of whole blood because of the anemia. It was thought at this time that therapy with thio-TEPA offered some hope for prolonging the patient's life. This was given IV on the basis of 0.2 mgs. per kg. for six days. The patient appeared to have no significant benefit subjectively or clinically from the therapy. She remained most of the time on her left side for relief from her dyspnea. About one month following her last admission she became somnolent and died shortly thereafter.

General Discussion: A total of 130 cases of malignant melanoma were examined at the Ohio State University Medical Center from 1947 through 1957.[1] No cases of prepubertal melanoma were seen. There were 63 patients who gave the history of having had a pre-existing mole at the site of the development of the melanoma; 20 stated that there was no pre-existing mole; and in 47 cases this information was unknown. As to location, 28 per cent of the lesions were located in the head and neck area, including the eye and oropharyngeal cavity; 20 per cent were located on the trunk; 16 per cent on the upper extremities; and 29 per cent on the lower extremities. The location was unknown in seven per cent of the cases. At the time of initial examination at that institution, 31 patients, or about 25 per cent showed evidence of regional lymph node metastases, while 57 patients, or 47 per cent demonstrated no clinical evidence of disease other than the primary lesion. Distant organ or lymph node metastases had already developed by 34 patients, or 28 per cent when first seen.

The first step in a recommended program of management for obvious or suspected malignant melanoma is complete local excision of the lesion with closure per primum, as contrasted to a partial lesion biopsy as carried out for most other neoplastic areas.[2] With a pathologic diagnosis of malignant melanoma and regardless of whether the pathologist has reported that "the lesion apparently has been completely excised," wide local excision of the involved site should be performed. The excision should include the underlying fatty tissues and the fascia overlying muscle which almost always necessitates closure by skin grafting.

The question for the management of regional lymph node bearing areas, both prophylactically and with positive metastatic disease, is a controversial one. If the primary lesion is in close proximity to a regional node bearing area, this nodal area should be radically resected, whether or not metastatic disease can be clinically demonstrated. The most commonly affected lymph node areas are, of course, the neck, groin, and axilla. Any operation in these areas should always be complete radical neck dissection, including all nodes from the mandible to the clavicle; radical groin dissection, in which both the femoral and iliac chains of lymph nodes are resected; or radical axillary dissection, with removal of the pectoral muscles if the lesion is located on the anterior chest wall. If the primary lesion is distantly removed from the nearest nodal area and this area contains no clinical evidence of disease, then only wide primary excision should be performed. In the case of primary melanoma occurring on an extremity with the regional node-bearing area containing metastatic disease, the procedure considered to yield the greatest cure rate is radical amputation of the extremity plus dissection of the nodal area. Careful follow-up examinations should be carried out. This program of management, in general, is in agree-

ment with Pack,[3] McCune[4] and Royster.[5]

The course of malignant melanoma is somewhat bizarre and unpredictable. In many cases, the disease will follow the pattern of most neoplasms, beginning in a preexisting mole, growing locally, and spreading systematically to the nearest lymph node area. In this type of case, there is certainly a good possibility of offering the patient curative surgical treatment, and the program of management is usually routine. However, in many instances, this lesion may just as often remain small and fairly innocuous at the primary site and may metastasize via the blood stream to a distant organ. This spread is to the liver, lungs, or brain directly, and any type of palliation is impossible. A third category or type of course for this disease must also be mentioned. With almost equal frequency, melanoma may be treated and remain well controlled at the local site, and then after a lapse of years the patient will develop metastases at some distant lymph node area which is still surgically accessible. If this were the clinical picture in other histologic types of cancer, palliation would be of short duration even if the metastases could be removed and the patient would soon succumb to generalized disease. This is not necessarily the case with malignant melanoma. Obviously, cure of disease at this point is impossible, but good palliation can often be offered the patient. It is thought that further surgical resection of a single area of distant metastases is definitely justified and worthwhile, and should be carried out, regardless of the location of the primary site. In addition, if nothing is attempted for such cases the bulky fungating lesion may produce painful death.

Comment: With a five-year survival of about 33 per cent it is demonstrated that this disease should not maintain its past reputation as one of the most lethal cancers in man. The curative possibilities are definite. Also, with a surgical approach based on a less hopeless attitude, and an understanding of the very bizarre nature of the malignant melanoma, the patient can be offered good and often long-term palliation. The report from a pathologist in which it is indicated that the "margins are free of tumor" is not as significant in melanoma as in carcinoma. In fact, this often gives the surgeon a false sense of security and the patient a poorer prognosis. Often lesions are excised in the physician's office, and the pathologist makes the diagnosis of melanoma with no microscopic evidence at the surgical margins. Sometimes nothing further is done because of this report, and the patient soon develops satellite lesions. The prognosis is definitely lowered when such a patient has to have a resection for recurrent disease. As mentioned previously, the initial excision should be wide and deep, usually necessitating skin grafting. It would be helpful if pathologists did not comment about disease at margins of limited excisions; at least, it should be indicated that this fact does not mean that the excision has been adequate.

The case here represents one where it was initially thought that the primary lesion was completely resected and there were no distant metastases. This patient had a period of two and one-half years without evidence of recurrence of the tumor. She falls into the category in which there was a lapse after good control at the primary site. It is unfortunate that the recurrence was in the inaccessible lung so that further palliation or possible cure could not have been attempted. Perhaps if the patient had seen her physician earlier and he had recognized the severity of the condition earlier then the course of the disease might have been somewhat better. It should be mentioned in conclusion that surgical treatment has been the only way to obtain good results. Radiotherapy should never be used initially and is not usually too helpful with palliation. □

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Cerebellar Astrocytoma

Report of a Case

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THE PURPOSE of this paper is to report a case of cerebellar astrocytoma occurring in a 30-month-old Negro female.

CASE REPORT

J.B., a 30-month-old Negro female was admitted to Children's Memorial Hospital on October 3, 1960 because of a four month history of stumbling and internal strabismus. The patient was reported to have been in good health with normal development until four months prior to admission, when the parents observed suggestive inability to walk. This began with a slight limp in the left leg and progressed to the point where the patient could walk only with support, and she fell easily. At approximately the same time the patient developed difficulty in focusing on objects and both eyes would "dance" horizontally before obtaining focus. She subsequently developed left internal strabismus. There was no history of nausea, vomiting, personality changes, increased headsize or convulsions.

Pertinent physical findings were: BP 100/68 P78 R18. Internal strabismus left, slight horizontal nystagmus bilaterally, funduscopic examination revealed bilateral papilledema and there was a positive McEwen's sign. Deep tendon reflexes were hypoactive in the upper extremities and hyperactive in the lower extremities. The Babinski was positive on the right and the Romberg was positive. There was a waddling wide base gait.

Roentgenograms of the skull revealed widening of the suture lines with some thinning of the dorsum sella. Bone survey was otherwise negative. Ventriculogram revealed dilation of the lateral ventricles and third ventricle. There was no displacement of the lateral ventricles from the midline. A tentative diagnosis of left cerebellar tumor was made.

On October 9, 1960 the patient underwent a suboccipital craniotomy with posterior fossa exploration, and removal of the tumor. On opening the dura, the left cerebellar hemisphere was noted to be larger than the right with the vermis displaced to the right. A 30cc cystic cavity was encountered in the mesial portion of the left cerebellar hemisphere with the tumor mass adjacent to the cyst. The tumor was removed and the immediate post-operative condition was good.

Subsequently, the patient developed a bulging mass at the site of the suboccipital incision and she underwent a primary repair of a suboccipital incisional hernia on November 27, 1960. Subsequent to this repair another mass appeared and it was thought the hernia had recurred.

The post-operative course had been good except for the recurrence of hernia. She was able to walk in a stroller and sit unassisted. Because of the Christmas holidays, she was discharged December 12, 1960, to return in January, 1961 for repair of the suboccipital hernia.

The patient has been seen only once since discharge. She still had a very large suboccipital defect measuring 13 x 8 cm. Ex-

amination revealed normal fundi, there was no nystagmus and she was walking better. It was the opinion of the neurosurgeon to wait a couple of months before considering another attempt at repair of the incisional hernia.

DISCUSSION

In 1931 Cushing[1] published his observations on cerebellar astrocytomas based on a study of 76 cases, and described in detail the clinical features, the relatively benign character of the tumor, the lower mean age, and the higher post-operative survival rate over cerebral astrocytomas.

The predominance of this growth in childhood prompted Cushing[1] to ascribe it to a congenital origin, but the observation of Bucy and Gustafson[2] lead them to regard cerebellar astrocytomas as a true neoplasm. The average age of occurrence is 13 years,[1] however, there is a marked range in age distribution and the incidence is nearly equal between male and female. In children, approximately half of the posterior fossa gliomas are cerebellar astrocytomas.[3, 4]

The patient with cerebellar astrocytoma may present with any one or all of the cerebellar signs such as ataxia, mystagmus, sometimes deafness, tennitus, and loss of vestibular reaction; involvement of the pyramidal tract with spasticity; stiffness of neck, suboccipital tenderness, and head tilting. There is usually evidence of increased intracranial pressure which is manifested by headaches, vomiting with or without nausea, diplopia, papilledema, behavior disturbances, and increased head circumference with widening of the sutures.[5] Perhaps the best lateralizing signs are ataxia and tilting of the head away from the side of the lesion.[3]

The radiologic features of these tumors of the cerebellum should be mentioned. Plain films often reveal widening of cranial sutures, convolutional pressure atrophy of the skull and erosion of the sella. Ventriculography or enchephalography often reveals the tumor in the posterior fossa.[6] The preferred method of treatment is radical surgical removal followed by intensive x-ray therapy if removal has not been complete. The prognosis is very good following surgical removal with a five year survival rate of 56 per cent in partially removed tumors and a 76 per cent five year survival rate after complete removal.

SUMMARY

A case of a 30-month-old Negro female with cerebellar astrocytoma has been presented along with a discussion of the clinical and radiologic features, and the method of treatment. □

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Localized Lymphangitic Sporotrichosis in a Six Year-Old Boy

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SPOROTRICHOSIS was first recognized by Luik[1] in 1809, but not until 1898 was it carefully described by Schenck,[2] and it was he who isolated the etiologic fungus which now bears his name. Since that time, many cases have been reported and the localized lymphangitic type of sporotrichosis has now been well documented. However, sporotrichosis is infrequently seen in clinical practice and frequently misdiagnosed. This paper is presented in the hope that it may reacquaint the physician with the typical lesion of sporotrichosis, a lesion which is readily diagnosable clinically.

CASE REPORT

D.D., a six-year-old boy, was referred to the University Hospital Pediatric Clinic on November 30, 1960, because of a pretibial ulcer of the right leg of four weeks duration. The lesion began as an erythematous papule on the anteromedial surface of the right leg about four inches above the ankle. Although no history of a cause for the lesion could be obtained, the boy had frequently played in a vacant lot with weeds and shrubs. The lesion became pustular and was "needled" by the mother in an attempt at drainage. However, the lesion began to enlarge and about a week after development of the initial lesion, subcutaneous nodules began to appear in linear distribution along the medial aspect of the right leg toward the groin.

At this time, a physician was consulted and penicillin and local salve were prescribed, without apparent improvement. Two weeks before coming to University Hospital, the patient was hospitalized for five days at another hospital. No diagnosis was made and no improvement was noted by the mother. He was discharged on a medication unknown to the mother.

Five days prior to his visit to University Hospital, several of the subcutaneous nodules began to break down and suppurate, and he was referred to University Hospital. Throughout the course of the illness, the lesions had all been nonpainful and the patient had not been systemically ill.

Physical Examination: When seen at University Hospital, the pulse was 88 per minute, temperature was 98.8 F and blood pressure was 112/80. The boy was in no apparent distress. The remainder of the physical examination was unremarkable except for the right lower extremity, where a 5 x 5 cm. ulcer with a granular appearing base was present over the anteromedial surface of the tibia about four inches above the ankle.

The lesion was tender and draining thick, yellow purulent material. A linear arrangement of several smaller erythematous subcutaneous nodules was present above the lesion extending up the medial aspect of the leg to the femoral triangle. The nodules were nontender and most were firm in consistency, however, a few were fluctuant and three were noted to be suppurating. Several small right inguinal and femoral lymph nodes were palpable.

Laboratory Data: Cultures of the purulent discharge from the ulcer on blood agar, chocolate agar, eosin methylene blue agar, ss agar, Loeffler blood serum, Petragnani medium were all negative as was culture in thioglycollate medium. Culture on Sabouraud's agar grew Sporotrichum schenckii. A tularemia agglutination test was negative. Skin tests for histoplasmosis and tubercu-

losis were negative. Stool examination for ova and parasites was negative. An initial urinalysis was not remarkable and two repeat urinalyses were also not remarkable. The hemoglobin was 12.5 gms. per cent. Hematocrit was 37 per cent. The white blood cell count was 5,500 with 51 neutrophiles, 42 lymphocytes, five monocytes, and three eosinophiles. Subsequent CBC's were all in the general range of the initial CBC. The erythrocyte sedimentation rate was 38 corrected, but decreased to 14 corrected at the time of discharge. A chest roentgenogram was not remarkable and those of the right leg showed no evidence of osteomyelitis.

Hospital Course: The patient was admitted to University Hospital and because the lesion looked so typical of sporotrichosis, he was begun right away on an oral preparation of saturated solution of potassium iodide. An initial three drops were given every eight hours. This dosage was increased one drop daily until a final dose of six drops every eight hours was attained. Throughout the hospital course the lesion was soaked for two hours twice daily with a 1:10,000 solution of potassium permanganate. Between soaks, Owen's fabric and 4 x 4's were applied over the wound.

During the hospital course, the patient remained afebrile and the ulcerated lesion granulated nicely and was fairly well healed by the time of discharge. The subcutaneous nodules had also regressed, and the patient was discharged December 20, 1960. A saturated solution of potassium iodide, six drops each eight hours, along with protective covering and occasional warm saline soaks to the ulcerated area was prescribed. The patient was followed on an outpatient basis, and by the third week in January, 1961, the lesion had healed entirely. Potassium iodide therapy was dicontinued February 21, 1961 since there was no recurrence of the lesion.

COMMENTS AND CONCLUSIONS

Sporotrichosis in human beings most frequently is associated with injury by plant material or wood since the causal agent, Sporotrichum schenckii, is widely distributed as a saprophyte on various plants, shrubs, and elsewhere in nature. The vast majority of cases are of the localized lymphangitic type, although reports of the disseminated sporothrichosis with involvement of the bone,[3] eye[4, 5] viscera and other organs[6] have been reported. Frequently there is a history of minor injury, most commonly on the extremities, preceding the appearance of a small pimple or pustule. This primary lesion often ulcerates and drains and is followed by the appearance of nodules arising along the lymphatics which drain the area. This patient's history was that of the appearance of a small pimple followed within two weeks by a series of subcutaneous nodules along the path of lymphatic drainage from the primary site. The process remained localized to one extremity and did not produce systemic symptoms.

When this patient was first seen, his lesions were apparently considered pyogenic in origin. This case was clinically typical and probably would not have escaped clinical diagnosis by any physician acquainted with the classic picture. If attention were directed to the possibility of a fungus as the cause of some chronic granulomas, perhaps more cases of sporotrichosis would be correctly diagnosed early in the course of the disease. The diagnosis, when clinically entertained, can be readily substantiated by culture of material from the primary ulceration or an aspirate from a nodule.

In the case reported here, the diagnosis of sporotrichosis was confirmed by positive culture and response to oral medication with potassium iodide. Although various agents have been used in the treatment of this disease, none have proved superior to or as specific as iodides in adequate doses. It is recommended that iodides be continued for another month after complete clinical remission,[3] since viable organisms can sometimes be cultured from clinically healing lesions. An infection can usually be controlled in six to eight weeks. □

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ABDOMINAL EPILEPSY

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IT HAS LONG BEEN recognized that epilepsy may show itself in various ways without convulsions or unconsciousness.[1] Trousseau (1868) reported the case of a boy, ten years of age, who had several attacks of pressure in the pit of the stomach, vomiting, giddiness, and pallor each day. Trousseau diagnosed epilepsy but could convince no one of this until a year later, when the boy had several undoubted grand mal seizures. The syndrome of abdominal epilepsy as it is understood today began with the report by Moore.[2]

Moore[3] has defined abdominal epilepsy as a disorder "characterized by bouts of paroxysmal abdominal pain, the latter being due to hypermotility of the bowel, provoked by abnormal discharges of certain neurons in the vicinity of biochemically or structurally altered cerebral tissue, presumably situated in the premotor and postmotor cerebral cortex and/or the diencephalon."

CASE REPORT

D.M., a 12-year-old white female was first seen in the Pediatric Clinic complaining of paroxysmal episodes of generalized upper abdominal pain of several weeks duration. The pain was described as a burning sensation and was not associated with time of day. It was, however, relieved by eating and lying down. There was no associated vomiting, diarrhea, constipation, fever, chills, jaundice, or hematemesis. The remainder of the history was non-contributory. Physical examination revealed a well developed and well nourished child having a blood pressure of 128/78, pulse 80 and regular, with respiration of 20/minute. The general physical and neurologic findings were normal. Laboratory data revealed Hgb 13.1 Gm. o/o, WBC 6,700, with a differential of N 43, Bands 1, L 53, M 3, and E 1. The urine was normal. A roentgenogram of the abdomen revealed no abnormalities.

The patient was seen in clinic at weekly intervals for the next several months. The abdominal pain became located above the symphysis pubis with radiation into the epigastrium. The pain became cramping in character with a duration of two to three minutes. The interval between the attacks was irregular. The patient would be free of abdominal discomfort for several days at a time, or several episodes of pain might be present in the same day. After an attack of pain, the patient would lie down because of feeling tired. The paroxysmal attacks were not related to stressful situations.

An upper G. I. Series and an excretory urogram failed to demonstrate any abnormalities. No abnormality of the pelvis was noted in Gynecology Clinic. An EEG record showed nine to ten/sec. activity with rare spike-like discharges of low voltage which where non-focal. The most important abnormality was the appearance of 14 and six/sec. positive spikes during the sleeping period.

The patient was started on Dilantin™* 200 mg/day without relief of symptoms. The medication was increased to 300 mg/day and the patient noted considerable relief from the abdominal complaints. Phenobarbital 100 mg/day was substituted for the Dilantin™. The episodes of abdominal pain ceased.

The patient was followed closely for the next 14 months. It was noted that if the patient took the phenobarbital regularly, there were no acute abdominal attacks. However, the attacks would recur if she failed to take her medication.

DISCUSSION

The clinical picture in this case is very similar to that in previously described cases. The outstanding symptom being paroxysmal abdominal pain. The pain is commonly epigastric in location. However, the pain has also been described as originating in the periumbilical region and in the left lower quadrant. The abdominal discomfort has an acute onset and is cramping in character. Commonly associated symptoms with the abdominal pain are postictal somnolence, nausea with or without vomiting, a disorder of consciousness and preictal somnolence.[4]

The electroencephalogram shows abnormal findings in approximately 75 per cent of the cases. The most frequent changes consist of rhythmical rectified spikes most easily seen in the intertemporal leads. Kellaway et al.[5] reported a series of 550 patients in which there was a positive correlation of convulsive equivalent disorders in children and the 14 and six/second positive spike. This 14 and six/second spike is believed to be electrical evidence of disordered brain function and does not constitute the discharge itself. These workers conclude that the underlying lesion of which the electrical abnormality is a manifestation apparently is generally epileptogenic in that it usually is associated with clinical and electrical abnormalities of paroxysmal character.

The causes of altered cortical function in abdominal epilepsy are the same as for any generally accepted form of epilepsy. Such etiologic factors are brain tumors, trauma, cerebral vascular disease, disseminated lesions as seen in tuberous sclerosis, metallic poisoning, and toxemias. The etiologic factor in the patient presented was never determined.

The response to anticonvulsant therapy is dramatic, as is noted in this patient. Furthermore, if the medication is discontinued, the symptoms will manifest themselves until therapy is reinstituted. This fact was well demonstrated in this patient.

The symptoms may regress spontaneously without the use of any medication. In other cases, the medication may be required to control the symptoms throughout the lifetime of the patient. In other patients, major convulsions may arise and the abdominal complaints will continue as the aura to the attack.

SUMMARY

Chronic recurrent bouts of abdominal pain presents the clinician with a difficult diagnostic problem. A case of abdominal epilepsy is reported. The diagnosis was based upon paroxysmal attacks of abdominal pain, the EEG record, and the response to anticonvulsant medications as well as recurrence of symptoms when the medication was discontinued. □

*Parke, Davis and Company

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The Nephrotic Syndrome in an Adult

Report of a Case

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THE NEPHROTIC SYNDROME was first described by Richard Bright.[6] It is a clinical entity characterized by massive proteinuria, hypoproteinemia, hyperalbuminuria and hyperlipemia with or without edema, hematuria, hypertension and azotemia.[2] It can be divided clinically into "pure" nephrosis characterized by proteinuria, hypoproteinemia, hyperlipemia and edema and "mixed" nephrosis in which hematuria, hypertension and azotemia may be added.[1]

This paper reports a case of the nephrotic syndrome in an adult of the "pure" type seen recently at University Hospital.

CASE REPORT

A 41-year-old white female was seen in the outpatient department complaining of weakness and swelling of face, arms, and legs for the past six months. She described an acute onset of her illness, awakening one morning to find her face, arms, and legs markedly swollen. There were no other associated symptoms. She consulted her local physician who instituted therapy with chlorothiazide, 500 mg. daily, which she has taken regularly for the past six months. She has continued, however, to have moderate swelling of face and extremities. She has had no pyuria, hematuria, passage of stones, dysuria, chills, fever, backpain or increased frequency of urination. There was no past history of renal disease, recent insect bites or exposure to toxins.

Physical examination revealed a well developed white female in no acute distress. Vital signs were normal including a blood pressure of 120/82. Funduscopic examination revealed the discs to be well outlined bilaterally without exudates and hemorrhages. Lungs were clear and examination of the heart was unremarkable. The abdomen was soft without demonstrable ascites or masses. Liver, kidneys, and spleen were not palpable. Examination of the lower extremities revealed multiple superficial varicosities bilaterally as well as marked edema below the knees. Neurologic examination was unremarkable.

She was subsequently admitted to University Hospital for further evaluation.

Laboratory data revealed: Hgb. 13.5 mg. per cent; Hct. 40 per cent; WBC 5,400 with 59 polys, 40 lymphocytes, 1 eosinophil and 1 monocyte; Sed. rate corrected to 39 mm. per hour. Urinalysis revealed SG 1.013; pH. 6; Protein four plus; Sugar 0; Acetone 0; WBC/hpf 1-10; RBC/hpf 1-5; Casts 1-10 hyaline; 24 hour urine for protein 7.7 gm.; FSB two hour p.p. 78 mg. per cent; PSP normal; Total serum protein 3.57 gm. per cent; Albumin 1.37 gm. per cent; Globulin 2.20 gm. per cent; Cholesterol 481 mg. per cent; Ca 8.6 mg. per cent; Phosphorus 5.5 mg. per cent; L.E. prep. negative times 3.

On admission only therapy instituted was bed rest and 1000 mg. NA, high protein diet. On this regimen the patient lost ten pounds over a one week period and total serum protein rose to a value of 5.8 gm. per cent with an albumin of 3.3 gm. per cent in two weeks. A chest roentgenogram was unremarkable except for a spherical calcific density in the right upper lobe, probably the result of old inflammatory disease. An IVP revealed a normal upper urinary collecting system. It also revealed an abnormal bladder configuration, probably secondary to uterine pressure. An ECG was reported as normal. A renal biopsy was reported to show chronic membranous glomerulonephritis. The patient was placed on Prednisone, 75 mg. daily, for three consecutive days each week and was discharged from the hospital to be followed at regular intervals in the OPD. She was instructed to continue on the 1000 mg. NA, high protein diet. Enough time has not elapsed since institution of therapy for a statement regarding follow-up to be made.

The diagnosis of the overt form of the nephrotic syndrome is usually simple; however, it is essential to establish, if possible, the coexistence of a clinical renal or systemic disorder such as diabetes mellitus, systemic lupus erythematosis, renal tuberculosis, amyloidosis, hemorrhagic glomerulonephritis, bilateral renal vein thrombosis, constrictive pericarditis, syphilis, malaria and sensitivity to gold, mercury, bismuth, trimethadione, paramethadione, poison oak and bee sting.[3] The diagnosis of the nephrotic syndrome of unknown etiology must be made by exclusion of the renal and systemic disorders named above as was done in this patient. A renal biopsy is essential in making this diagnosis.

In cases of the nephrotic syndrome in which the etiology is uncertain or unknown as is the case in this patient, Lange et al. suggests that there is an immunologic basis characterized by a complement-binding antigen-antibody reaction that produces functional and, when persistent, morphologic tissue damage.[7]

The pathologic changes in membranous glomerulonephritis of adults as seen with the light and electron microscope have been described by Movat and McGregor who suggest that the basic change resides in the glomerular epithelium. They report the deposition of an acidophilic protein material, varying in density, outside the basement membrane. This is thought to account for the apparent thickening of the basement membrane seen in hemotoxylin and eosin and periodic acid-Schiff-stained sections. The deposit is probably derived from extravasated plasma proteins which occur because of an increased permeability of the basement membrane.[8] Farquhar and her associates describe a loss of foot processes as being the earliest lesion in patients with "pure" nephrosis, in both adults and children. In the more advanced lesions she describes a thickening of the basement membrane.[4]

Contrary to widely held opinions, there is no definite correlation between the clinical findings of hypertension, azotemia and hematuria on the one hand and the degree of damage to the glomerulus on the other. Folli et al. report a case of the nephrotic syndrome in a patient with blood pressure of 160/90 mm. of Hg and evidence of severe impairment of renal function. Renal biopsy revealed normal glomeruli under light microscopy. Electron microscopy revealed a loss of foot processes.[5]

The goals of treatment of the nephrotic syndrome should be the survival of the patient and recovery from the renal disease. This can best be accomplished by the following principles of treatment. Bed rest is indicated if the patient has massive edema or infection. The sodium content of the diet should be kept low at 1.0 to 1.5 gm. The restriction of fluid is unnecessary. Bacterial infections must be promptly and adequately treated. Measures for the elimination of the edema should be employed.[3]

The adrenal cortical hormones exert a beneficial effect on some adult patients with the nephrotic syndrome of unknown etiology because of their effectiveness in inducing diuresis. The diuresis, which occurs results in massive losses of sodium and edema fluid, in increased glomerular filtration rate, decreased proteinuria, increase in plasma protein, and decrease in serum cholesterol. Prolonged therapy is thought to be necessary for optimal results by some workers in this field. Post and Eckel recommend I.V. ACTH (20-40 mg.) administered each day over an eight hour period for a total of 10-14 days. They then maintain the patient on prednisone, 40 mg. daily, for one to two years and then gradually discontinue the medication.[9] Derow favors prednisone, 20 mg. every six hours for 14 days, followed by maintenance therapy of 20 mg. every six hours on three consecutive days each week from six months to one year. If remission fails, a second course is given beginning seven to ten days after the end of the first course. If this fails, a third course may be tried.[3]

The use of plasma-expanders such as concentrated human albumin, dextran, or triple-strength plasma has on the whole been disappointing. The main indication for their use is in patients who do not respond to steroid therapy and who show increasing edema despite other measures. Williams and Ryan report a case which is an exception to the general rule. They induced diuresis in a patient with the nephrotic syndrome by means of intravenous infusion of concentrated human serum albumin after they failed with steroids. Dosage used was 15

gm. per hour up to a total dose of 1 gm. per kg. body weight, however, the dose did not exceed 150 gm. per week. There were no systemic or local reactions. On follow-up, 15 months after the onset, there were no abnormal findings on examination.[10]

Recovery is characterized by the disappearance of edema and proteinuria and the return to normal values of the plasma proteins and serum cholesterol as well as a return to the normal histologic pattern on renal biopsy. The nephrotic syndrome may recur after a period ranging from months to years; therefore, the prognosis in this disease is always guarded. Hypertension and impairment of renal function may develop resulting in the patient's death from uremia or from hypertensive and arteriosclerotic cardiac or cerebral complications.[3] Studies of the adult nephrotic syndrome of unknown etiology are not extensive enough to make any statement in regard to this patient's prognosis. □

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Wesley Hospital, Oklahoma City, Oklahoma

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Splenic Artery Aneurysm

Report of a Case

ROBERT JAMES HOGUE, Jr., M.D.

SPLENIC ARTERY ANEURYSM is a rare but not unheard of condition in which diagnosis before rupture is possible and is life-saving.

CASE REPORT

A 56-year-old white male construction worker was admitted to the Medicine Service of Wesley Hospital, February 17, 1960 with the chief complaint of epigastric pain of four years duration. The patient states that he had had intermittent episodes of heartburn or indigestion for a number of years, usually controlled by "Tums"* until about 1956 at which time he developed pain localized under the xiphoid process. About two years prior to admission, it became more severe and more constant. During this period of time it had been only fleetingly and partially relieved by food, milk, or antacid. The patient states he had various diagnostic studies and roentgenograms of the intestinal tract, chest and heart by his family physician, all of which have been unrewarding. This pain had often kept the patient awake at night and the only relief he had gotten was by vomiting. He had noticed that nervous tension, alcohol and spicy foods aggravated his pain. He had, on a few occasions, vomited small amounts of dark blood. He denied melena, and symptoms of obstruction, perforation or posterior penetration. Past history revealed the patient had an appendectomy several years prior to admission and that six years prior to admission, he had a severe fall, sustaining fractures to both arms, both legs, his pelvis, spine and ribs.

Physical examination showed a well nourished white male complaining of pain in the epigastrium. The temperature, pulse, respirations and blood pressure were normal. The chest showed increased anterior-posterior diameter and was somewhat hyperresonant to percussion. Breath sounds were decreased in both bases. Examination of the cardiovascular system revealed no abnormalities. The abdomen was flat with normal bowel sounds, and on palpation there was found to be tenderness in the high epigastric region which was somewhat diffuse, with slight muscle guarding in that region. The liver was palpable four cm. below the right costal margin and was firm, regular and non-tender. No other organs or masses were palpable in the abdomen. No bruits were heard in the abdomen. The remainder of the physical examination revealed no abnormalities.

The urine was normal. Examination of the blood revealed a hemoglobin of 15.9 gm. per 100 ml, a hematocrit of 48 and a white-cell count of 8,400. The serum amylase was 41.5 mg. per 100 ml. A 12 hour night gastric suction showed a volume of 780 ml with 10.60° free hydrochloric acid.

On admission the patient was placed on constant gastric suction, sedated and re-

*Lewis-Howe Company.

quired meperidine for pain. Intravenous fluid maintenance was begun. A repeat gastric analysis on a seven a.m. to three p.m. specimen on the third hospital day showed a volume of 150 cc. with 20° total acidity and 17° free hydrochloric acid. Two upper gastrointestinal series, oral cholecystogram and chest roentgenograms revealed no abnormalities. Electrocardiogram showed sinus tachycardia. Stools for occult blood and blood cultures were negative. Urine was negative for porphyrins and porphobilinogen. The patient was given hourly feedings and still obtained no relief from his pain. On the fifth hospital day the material returning through the gastric suction began to take on a "coffee-ground" appearance and was positive for blood. Serum calcium and phosphorus on this day were normal. The hemoglobin on this day was 14.6 mg. per 100 ml, and the alkaline phosphatase and serum glumatic oxalic transaminase were normal.

Exploratory laparotomy was performed on the tenth hospital day and upon entering the abdomen there was found very slight scarring on the anterior surface of the duodenum. No other lesion of the small intestines was found. The colon and gallbladder were normal. A bruit was felt in the area of the celiac axis when a finger was placed in the foramen of Winslow and further dissection revealed an aneurysmal dilitation of the splenic artery with an aberrant artery from the splenic artery just proximal to this point going to the left lobe of the liver. Splenectomy was performed with resection of the splenic artery and aberrant hepatic artery. The pathologist's diagnosis was confirmatory.

The patient had an uneventful postoperative course and was free of abdominal pain. He was discharged on the eighth postoperative day. At six month follow-up examination the patient had remained free of abdominal pain.

DISCUSSION

Aneurysm of the splenic artery is a rare but not unknown entity. It was first described by Beaussier[1] in 1770 who made the observation while injecting the abdominal aorta and femoral veins of a 60-year-old female cadaver for anatomic demonstration.

In 1881, President James A. Garfield, undoubtedly the most famous case of splenic artery aneurysm, died two months after being shot in the abdomen by an assassin. Death was found to be due to a ruptured splenic aneurysm which had developed from trauma inflicted by the bullet.[2, 3]

Although many cases were described in the literature following Beaussier's original work, the lesion was not identified in a living subject until 1903 when Winkler,[4] discovering several small aneurysmal dilitations of the splenic artery during an operation, removed the spleen without excising the aneurysms. The patient had experienced abdominal pain over a period of eight years. She recovered and lived 25 years.

Credit for the first preoperative diagnosis of a splenic artery aneurysm belongs to Haegler,[5] who in 1920 identified a case on the basis of a systolic murmur over a pulsatile mass noted on fluoroscopy. Confirmation of the clinical diagnosis was established at autopsy, and in addition a carcinoma of the pancreas was found.

A review of the literature by Sheps et al.[6] at the Mayo Clinic in 1958 revealed that 230 cases had been reported up to that time. They added 47 cases to the series and since then there have been an additional 18 cases reported in the English literature.[7, 8, 9, 10]

Sheps et al. also collected 103,360 necropsies and found an average incidence of splenic artery aneurysm of 0.05 per cent which is very close to the incidence of 0.038 per cent reported by Owens and Coffey[11] from 96,741 collected autopsies. This is the most common intra-abdominal aneurysm aside from those of the aorta and iliac vessels.

Of all arterial aneurysms, those of the splenic artery are the only ones occurring more commonly in women; other aneurysms occur more commonly in men by a ratio of four or five to one. However, splenic artery aneurysms have been shown in various series[6, 10, 11, 12] to occur from two to three times more commonly in females.

Summarizing the 304 reported cases the age group in which this condition is most commonly seen is the fourth, fifth and sixth decades of life. The average age in Owens'

and Coffey's series was 48 whereas in the 47 cases reported from the Mayo Clinic[10] 50 per cent were in the 60 to 80 year group. In this series only five of 46 women were less than 50 years of age, a finding contrary to that reported by Owens and Coffey in their review of reported cases where 46 per cent were in the childbearing age and of these, 53 per cent were pregnant at the time the aneurysm was identified. The youngest reported case was in a child 14 years of age.[13]

The cause of splenic artery aneurysm is unknown. However, there are certain factors which have been found common to considerable numbers of those reported.

Changes due to arteriosclerosis have been found more frequently than any other single pathologic change. In Owens' and Coffey's review 60 per cent showed atheromatous changes in the arterial wall and in those reported by Spittle et al.[10] this was the histologic diagnosis in 57.9 per cent. In Owens' and Coffey's review they found many cases of localization of the arteriosclerotic changes to the splenic artery and 15 of these cases were under 40 years of age. Guy[14] and Sherlock and Learmonth[15] have noted that tortuosity of the splenic artery is a characteristic finding and it has been shown that arteriosclerotic changes are the most severe on the convex sides of the bends and this is where the aneurysms are most likely to develop.

Congenital defect was reported as the third most frequent cause by Owens and Coffey but later reports,[6, 10] seem to indicate it is the second most common etiologic factor. Incidence varies from ten per cent to 40 per cent. In these cases there is an absent or faultily developed internal elastic membrane of the intima or fibrotic areas of the media.

Mycotic aneurysms are also not infrequent and occur in association with subacute bacterial endocarditis and are believed due to embolic phenomena. Histologically these show the wall of the eneurysms to be composed of acute inflammatory tissue with little muscle or elastic tissue remaining.

Other causes reported include portal hypertension, syphilis, trauma, infection and dissecting aneurysms.

Multiple aneurysms of the splenic artery are not uncommon and in the series from the Mayo Clinic,[6] 21 per cent were found to have aneurysms elsewhere in the body.

The relationship between pregnancy[17] and development of rupture of a pre-existing aneurysm is not well understood but it is thought that the increased intra-abdominal pressure puts added tension on an already weak spot in the splenic artery which precipitates rupture. Owens and Coffey found 31 patients, or 24 per cent of the females

Factors		Cases		Incidence (Per Cent)
Major	Minor	No.	Total	10 20 30 40 50 60 70 80 90 100
Clinical Features	Abdominal Pain	93	131	71
	Nausea and Vomiting	39		30
	No Pain Reported	38		29
	Hematemesis	24		18
	Constipation and Diarrhea	22		17
	Indigestion and Dyspepsia	18		14
	Weakness	15		11
	Melena	15		11
	Dyspnea and Vertigo	10		8
	Weight Loss	7		5
	Epistaxis	6		5

Figure 1. Analysis of clinical features noted in 131 cases of aneurysm of the splenic artery. Owens and Coffey[11]

with splenic artery aneurysm were pregnant and rupture was present in 100 per cent of those diagnosed during pregnancy. Rupture usually occurred in the third trimester.

The clinical picture (figures 1 and 2) of aneurysm of the splenic artery as determined by detailed review of reported cases[11] includes abdominal pain as the most frequent symptom, with or without nausea and vomiting. The pain is most commonly localized in the upper abdomen and left hypochondrium, but may be diffuse throughout the abdomen or radiate into the back. The severity of the pain varies greatly and it is usually colicky in nature. The pain may precede rupture for only a few minutes or may be present many years. Bending, exercise or exertion may aggravate the pain.

Associated with the abdominal pain were many other symptoms, most of which were referable to the gastrointestinal tract. Intermittent nausea and vomiting were observed in 30 per cent. Vague attacks of indigestion and dyspepsia were the presenting complaints of 14 per cent. Hemorrhage into the stomach or intestine, manifested clinically by hematemesis or melena, occurred in 30 per cent. Constipation and diarrhea developed in 17 per cent, weakness in 11 per cent, loss of weight in five per cent and dyspnea and transient vertigo were reported as minor symptoms in eight per cent.

Physical examination often reveals little besides tenderness in the epigastrium which may be slight or rather severe. This was present in 25 per cent. The incidence of palpable spleen in this review was 44 per cent.

The appearance of shock in only 27 per cent seems rather low since 94 cases of rupture were reported.

A palpable tumor, other than of the spleen, was found in 29 cases (22 per cent) but in only ten (eight per cent) was this pulsatile. Of the ten pulsatile tumors, a bruit was heard over four and in 12 other cases (nine per cent) a bruit was heard in the absence of a palpable tumor. Abdominal distension developed in 17 per cent and in eight per cent hepatomegaly was present. Abdominal rigidity and convulsions were other reported physical findings.

On the basis of history and physical examination, the diagnosis of an aneurysm of the splenic artery is extremely difficult. However, the development of epigastric pain or pain in the left upper quadrant, in association with the other listed symptoms, plus

Factors		Cases		Incidence (Per Cent)
Major	Minor	No.	Total	10 20 30 40 50 60 70 80 90 100
Physical Examination	Splenomegaly	57	131	44
	Signs of Shock	35		27
	Abdominal Tenderness	33		25
	Abdominal Mass	29		22
	Abdominal Distension	22		17
	X-ray Evidence	19		15
	Bruit	12		9
	Hepatomegaly	11		8
	Pulsatile Tumor	10		8
	Abdominal Rigidity	9		7
	Convulsions	5		4
	Bruit and Pulsitile Tumor	4		3

Figure 2. Analysis of findings on physical examination of 131 cases of aneurysm of the splenic artery. Owens and Coffey[11]

detection of splenomegaly, a pulsatile tumor or a systolic murmur in the upper abdomen should make one highly suspicious.

Roentgenography is probably the most useful means of diagnosis today. In the above review[11] in 1953 only 15 per cent showed roentgenographic evidence. However, in the 15 cases of Spittel et al. which were diagnosed preoperatively, 13 showed roentgenographic evidence. The common findings include calcification,[10, 12, 19] a pulsatile filling defect in the posterior wall of the stomach[11] seen on fluoroscopic examination, and more recently by abdominal aortography.[7, 8, 18, 19]

The most common and serious complication of this condition is, as with any arterial aneurysm, rupture.[20] The interval between onset of symptoms and rupture is highly variable as mentioned before. These may rupture into many different areas, the most common of which is the peritoneum. Other less common areas include, stomach, lesser sac, retroperitoneum, colon, greater sac, pancreas, splenic vein and into the left chest.

Two stage, or so-called "double rupture" is relatively common, having occurred in 43 of 94 ruptures in Owens' and Coffey's series of 204 cases (21 per cent). The initial rupture occurs into the lesser sac, producing either pain in the upper abdomen, shock or both, plus signs of peritoneal irritation. This first rupture is usually not fatal, for clotting occurs rapidly in the limited space of the lesser sac or retroperitoneal area. Further hemorrhage is temporarily delayed. The patient may improve clinically, and during this time diagnosis and surgical treatment is life-saving. Some time after the primary rupture, a secondary hemorrhage, usually into the greater peritoneal cavity, but occasionally into the stomach or colon, will occur. This almost invariably results in death. Secondary hemorrhage usually develops within 48 hours after the initial rupture.

The treatment of this lesion is splenectomy with complete removal of the splenic artery.

The incidence of rupture has been reported from 8.2 to 46 per cent.[10, 11, 19] The mortality from operation if diagnosed before rupture is 15 per cent[19] or less[10] but following rupture the mortality approaches 100 per cent[21] as with any ruptured aneurysm. □

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Gilles de la Tourette's Syndrome

Report of a Case

PRESTON W. DeSHAN, Jr., M.D.

In 1885 George Gilles de la Tourette published a paper describing nine patients with multiple tics and coprolalia. Since then numerous similar cases have been reported and it is now possible to characterize more fully the syndrome which is named after Gilles de la Tourette. Typically the onset of the disorder is in childhood, between the ages of six and sixteen. It most frequently affects males. Initially the tic involves muscles of the head and neck but gradually spreads to other muscles. Frequently, but not invariably echolalia appears. At some point in the progression of the disease the patient begins making involuntary utterances. These gradually develop from inarticulate sounds to articulate words of an obscene nature. This coprolalia when associated with tics, is pathognomonic.[1]

Fewer than fifty cases of this interesting syndrome have been reported in the English literature. This justifies the reporting of an additional typical case.

CASE REPORT

J.E. is a seven and one-half-year-old white male whose present illness began at the age of five, when he began having tics manifested by head nodding. He soon developed shaking spells involving his entire body, which would last several seconds. The family's physician was consulted and diagnosed the condition as habit tics. Scoldings and bribing by the parents failed to alter the patient's symptoms. Fifteen months after onset of the tics the patient began making noises similar to the whinning of a puppy. This was annoying to those around him and he was soon suspended from school. Because of his increasing symptoms the patient was referred to Children's Memorial Hospital, Oklahoma City, for evaluation. Physical examination at that time was not remarkable. He remained in the hospital for approximately one month and showed considerable improvement without specific therapy. He was discharged on Atarax* syrup, 1 tsp q 6 h and Gemonil** 100 mgms. daily. He had been home for approximately two weeks when he developed echolalia. He soon began stamping his feet, sniffing, clearing his throat, and patting his abdomen. These actions again caused the patient's suspension from school and he was readmitted to the hospital for further evaluation. Physical examination, including an extensive neurologic examination, was not remarkable except for squinting, frequent eye blinking, and sniffing, and patting his abdomen repetitiously with his right hand. An electro-encephalogram revealed rare spike-like, non-focal right temporal activity. Psychometric evaluation indicated mild mental retardation, his IQ being in the 77-85 range. It was thought that the patient was definitely not psychotic. Skull films were normal. The patient was

*J. B. Roerig.
**Abbott Laboratories.

continued on Atarax and Gemonil. He manifested few tics while in the hospital except when stressed, for example by threat of venipuncture. He was discharged after approximately one month of hospitalization. He was home for one week before his symptoms returned. He soon developed coprolalia and began having numerous fights with neighborhood children because of his peculiar behavior. He was again suspended from school and was finally readmitted to the hospital three months after his previous discharge. In the hospital his symptoms decreased but did not leave completely. He was somewhat of a behavior problem on the ward. He was discharged at the end of two weeks to Children's Convalescent Hospital, Bethany. His symptoms temporarily increased then again subsided as he adjusted to the new environment. Attempts were made to place him in a special home for retarded children but the parents refused to give their consent and after hospitalization for one month at Bethany he was discharged to his parents.

Past History: The patient was delivered at term without trauma after an uncomplicated gestation. He walked at eight months, talked well at two and one-half years and was toilet trained by age three. He had measles and chickenpox before age three without sequalae. He sustained a fracture of the left forearm approximately one year ago which healed without incident. Previous neurotic behavior included nail biting and thumb sucking.

Social History: His parents were divorced when the patient was three years old. Since then he has lived with his father and stepmother and has seen his mother only twice. He lived with his paternal grandparents for long periods during each of his stepmother's three pregnancies. He obeys his father and grandparents but not his stepmother. He has two sisters, an 11-year-old with severe mental retardation who lives with his paternal grandparents and a seven-year-old who lives with his mother. He has two half sisters, ages eight months and three years, who live with him.

DISCUSSION

This patient presents with the typical components of Gilles de la Tourette's Syndrome: progressive tics, echolalia, and coprolalia with onset in early childhood. The etiology of this disorder is not known. Only two autopsies have been reported and these failed to reveal any significant pathology.[1] The predictable course of the disease, the deterioration which occurs, and the predominant motor features would seem to indicate organic brain disease but there has been no consistent correlation with trauma, encephalitis, or brain tumors. Persons afflicted with this disorder usually have no significant neurologic findings and reported IQ's have ranged from 80 to 155.[1] Because of these factors and because approximately 40 per cent of these patients eventually become psychotic, a psychogenic basis has been postulated.[2, 3] The only evidence of neurologic pathology in this patient is moderate mental retardation and a mildly abnormal EEG. His early environment was extremely psychopathogenic, with parental rejection and sibling rivalry. His improvement in the hospital and exacerbations at home suggest a casual relationship between his symptoms and his home environment. It is possible that this condition represents an organic defect but that the clinical syndrome is precipitated by and altered by psychogenic factors.

The appearance of coprolalia is a significant event to persons with this disorder. When coprolalia appears the patient becomes a pariah. Shunned by family and friends, expelled from school, or fired from their jobs, many of these patients go into a psychotic withdrawal.

Various authors have reported the use of barbiturates, amphetamines, electro-shock therapy, hypno-therapy, Thorazine,* and narco-analysis in attempting to treat the disorder. None of these measures have given consistently good results. Psychotherapy has for the most part been unsuccessful, even when intensive, although a few scattered reports indicate good results.[5, 6] In 1957, Michael described a typical case with onset at age seven.[6] At age 28, the patient entered intensive psychotherapy but 40 interviews produced no discernable improvement. The patient was then started on 70 per cent CO_2 inhalation therapy four times per week. There was a gradual reduction in the pa-

*Smith, Kline & French Laboratories.

tient's tension and in the frequency of his tics. He retained a slight vocal tic, hiccoughing three to four times per day, but otherwise was free of symptoms during a follow-up interview 15 months later. There are no other reports of the use of CO_2 inhalation therapy in the available literature, so evaluation of its usefulness is impossible; however, it seems at least to be promising. There are several other reports of successful treatment of this disorder, such as Bockner's reported success with chlorpromazine,[8] but most of these results are equivocal because of too brief a follow-up period (six weeks in the case of Bockner) or because incomplete descriptions in the case reports make the diagnosis questionable.

If this patient is seen again in exacerbation it is planned to try CO_2 inhalation therapy so that this promising technique can be further evaluated.

SUMMARY

1. Gilles de la Tourette's Syndrome has been briefly discussed.
2. A typical case has been reported. □

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The Giant Dog Ear Syndrome

Report of a Case

JANE SELF, M.D.

ALTHOUGH numerous pathologic conditions of the atria have been described, the following is the second reported case of an isolated enlargement of the left atrial appendage.

CASE REPORT

History: The patient is a 57-year-old white, male, farmer with a two year history of infrequent episodes of asthma characterized by shortness of breath and tight feelings in his chest at night, relieved by sitting up and taking a proprietary-type asthma medicine. One month prior to admission to University Hospital he developed fever, chills, wheezing respirations and pedal edema treated with medicine by injection and by mouth by his local medical doctor with symptomatic relief. A roentgenogram taken at that time revealed a "spot" next to his heart, and he was referred to the University Medical Center for diagnosis. His father and one brother have asthma. There is no history of rheumatic fever.

Physical Examination: BP 120/80, respirations 18, pulse 80 and irregular, weight 131 pounds, height five feet seven inches. Positive physical findings were slight venous distention of the superficial neck veins, grade I soft blowing systolic murmur at the apex with an apical rate of 100 without clinical cardiomegaly, liver palpable four cm. below the right costal margin, and a 1-2+ pitting pre-tibial edema. There were no rales in the lungs.

X-ray: Routine roentgenogram of the chest revealed bilateral pleural effusion or reaction, old calcified inflammatory disease in the lower part of the right lung, generalized pulmonary emphysema, and an abnormal cardiac or pericardial silhouette. Examination with barium in the esophagus revealed left ventricular hypertrophy, and an abnormal bulge at the left upper border of

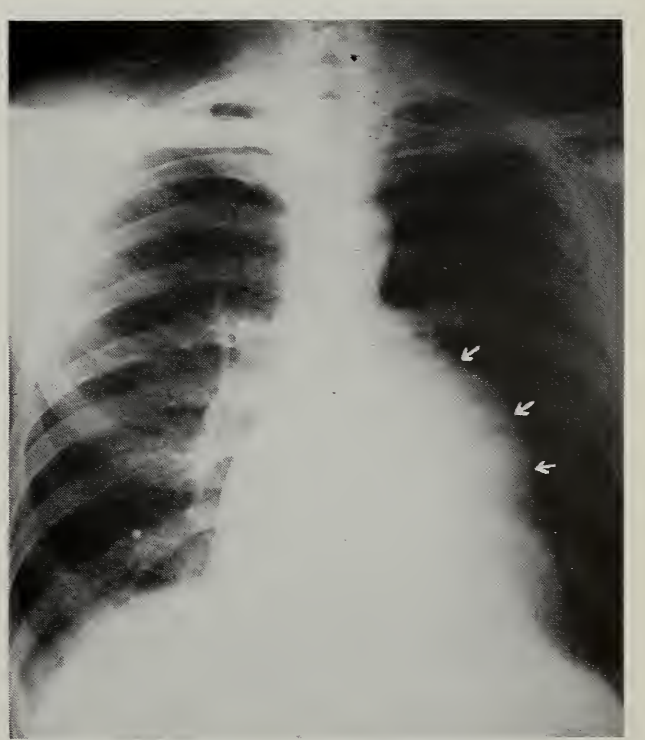


Figure 1. Chest x-ray. Arrows outline the enlarged artrial appendage in the PA view.[2]

the heart of unknown etiology.

ECG: Electrocardiogram showed auricular fibrillation and primary T wave changes compatible with digitalis effect.

Phonocardiogram: Revealed a systolic murmur loudest during the first one-half of systole at the apex.

Laboratory: Hb. 12.4 gms. per cent, Hct. 40 per cent, WBC 11,600, TSP 5.9 gms. per cent with a 3.6/2.3 A/G ratio, alkaline phosphatase 0.9 BL units, cephalin flocculation 0 in 48 hrs., BSP 9 mg. per cent retention in 45 minutes, BUN 10 mg. per cent, ASO 1:125, and CRP negative.

Angiocardiography: At the time of cardiac catheterization the pressures were within the normal range. Injection of dye revealed an enlarged left atrium. Connected to the atrium and filling from it was another chamber which pulsated oppositely from the ventricle and was thought by the examiners to be the left atrial appendage.

Hospital Course: Digitalization resulted in symptomatic improvement, disappearance of edema, the systolic murmur, and the patient was discharged. He was readmitted when the surgical consultant recommended conversion to a sinus rhythm prior to exploratory thoracotomy. This was done with quinidine after anti-coagulation with Coumadin,* and he was discharged to await operation.

*Endo Laboratories.



Figure 2. Selective angiocardiography. Contrast medium has been injected into the pulmonary artery. The pulmonary veins, left atrium (A) and the enlarged atrial appendage (B) are outlined in the venous phase.[2]

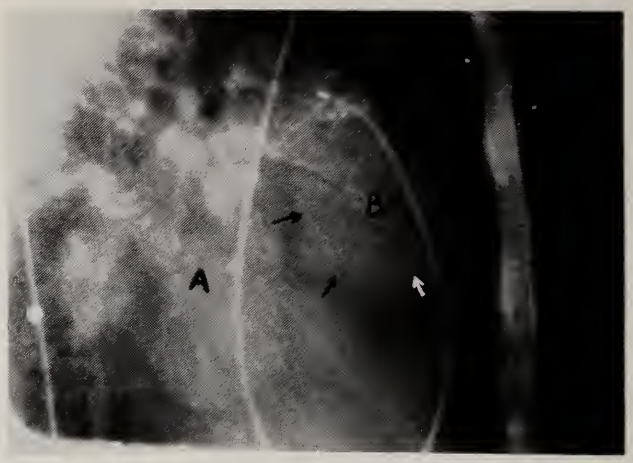


Figure 3. Selective angiocardiography. In the ROP position contrast medium is observed in the left atrium (A) and the atrial appendage (B) is outlined anteriorly (arrows).[2]

DISCUSSION

Dimond et al.[1] reported the first case of a hypertrophied left atrial appendage and coined the phrase "giant dog ear syndrome." In their case the appendage herniated through a pericardial defect. Pathologic examination of the appendage after removal at surgery revealed no evidence of recent or old infarction or Aschoff bodies. There is no history of rheumatic fever in this patient, nor any clinical findings to support it. Also, there is no ECG evidence of ventricular infarction. I was unable to find a report of a case of atrial infarction, without associated ventricular infarction. Therefore, labeling this patient's atrial enlargement as idiopathic is justified.

These two cases have in common the fact that they presented diagnostic problems, because of an unusual shadow on roentgenograms of the chest.

SUMMARY

A second case of the "giant dog ear syndrome," or idiopathic hypertrophy of the left atrial appendage is reported. □

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2. Roentgenologic studies done by Doctors H. Tabyi and J. D. Kyriacopoulos, Departments of Radiology and Medicine, University of Oklahoma Medical Center. Reproductions by the courtesy of the Department of Radiology.

St. John's Hospital, Tulsa, Oklahoma

A Note on Squeezing the Sponge

DAVID C. MOCK, M.D.*

NOT SO VERY long ago, the physician treating a waterlogged patient prescribed tablets of ammonium chloride to be consumed in generous quantities for a few days, and if that didn't turn the trick, he injected a few cc. of his favorite mercurial and awaited a salutary unloading. If these failed, he tried artistic combinations of the foregoing, sometimes fortified with a xanthine, and all were occasionally gingered-up with hypertonic glucose to "raise the osmotic pressure." This rather empiric therapy benefited a substantial number of patients, but the growth of knowledge concerning renal function together with the introduction of new compounds having different modes of action, enables a physician today to more efficiently manage his patient. Effective diuresis depends upon two basic maneuvers: First, to get the maximum amount of filtrate through the glomerulus, and second, to prevent as far as possible, its reabsorption in the tubule. The first is accomplished when cardiac output is raised in the patient who has congestive failure by the administration of digitalis. This may be augmented by one of the xanthines, such as aminophyllin, which also appear to enhance renal blood flow.

The second is attempted in several ways. Osmotic diuretics (urea, mannitol) oppose the reabsorption of water along the tubule, thus producing a water diuresis, and also maintaining the sodium in dilute solution and thereby decreasing the efficiency of the sodium reabsorption mechanism.

In the proximal tubule, mercurial and benzothiazide diuretics oppose the reabsorption of sodium and chloride by attacking the sulfhydryl enzyme systems. Present evidence indicates an acid environment is necessary to activate the organic mercurials. Acidifying salts are also mildly diuretic by carrying out sodium with the excess anion. This effect declines rapidly, however, and their usefulness is short-lived.

Carbonic anhydrase inhibitors such as acetazolamide and the benzothiazides, operate in the distal tubule. Normally, hydrogen is here traded for sodium in an ion exchange. By lessening the amount of hydrogen ion available, more sodium remains in the urine. Both of these drugs cause a rather large potassium excretion, and patients receiving them may also require potassium chloride or a diet rich in this element. So far, there does not appear to be any very convincing evidence indicating a marked difference in the diuretic properties of the various benzothiazides apart from milligram-for-milligram differences in potency. This "more pee per pill" sort of variation has little clinical validity.

Aldosterone actively promotes the absorption of sodium and the excretion of potassium in the distal tubules. To a limited and poorly understood extent, progesterone and the glucocorticoids modify the tubular effects of aldosterone, and are occasionally diuretic. The spironolactones are the best drugs currently available for this purpose. They are costly, however, and their action is so selective that their use should probably be limited to those patients who show evidence of secondary hyperaldosteronism—notably, those with cirrhosis and ascites. This may also occur in other conditions such as chronic congestive failure, and the finding of an elevated potassium and lowered sodium content in the urine may be of significant diagnostic assistance in this regard.

Note: Booklets on the "Mild Sodium Restricted Diet," the "1000 mg. Sodium Diet" and the "500 mg. Sodium Diet" are available on prescription to your patients from the Oklahoma State Heart Association, 825 N.E. 13th St., Oklahoma City 4, Oklahoma. □

*Assistant Professor of Medicine, University of Oklahoma Medical Center and Staff Physician, Veterans Administration Hospital, Oklahoma City, Oklahoma.



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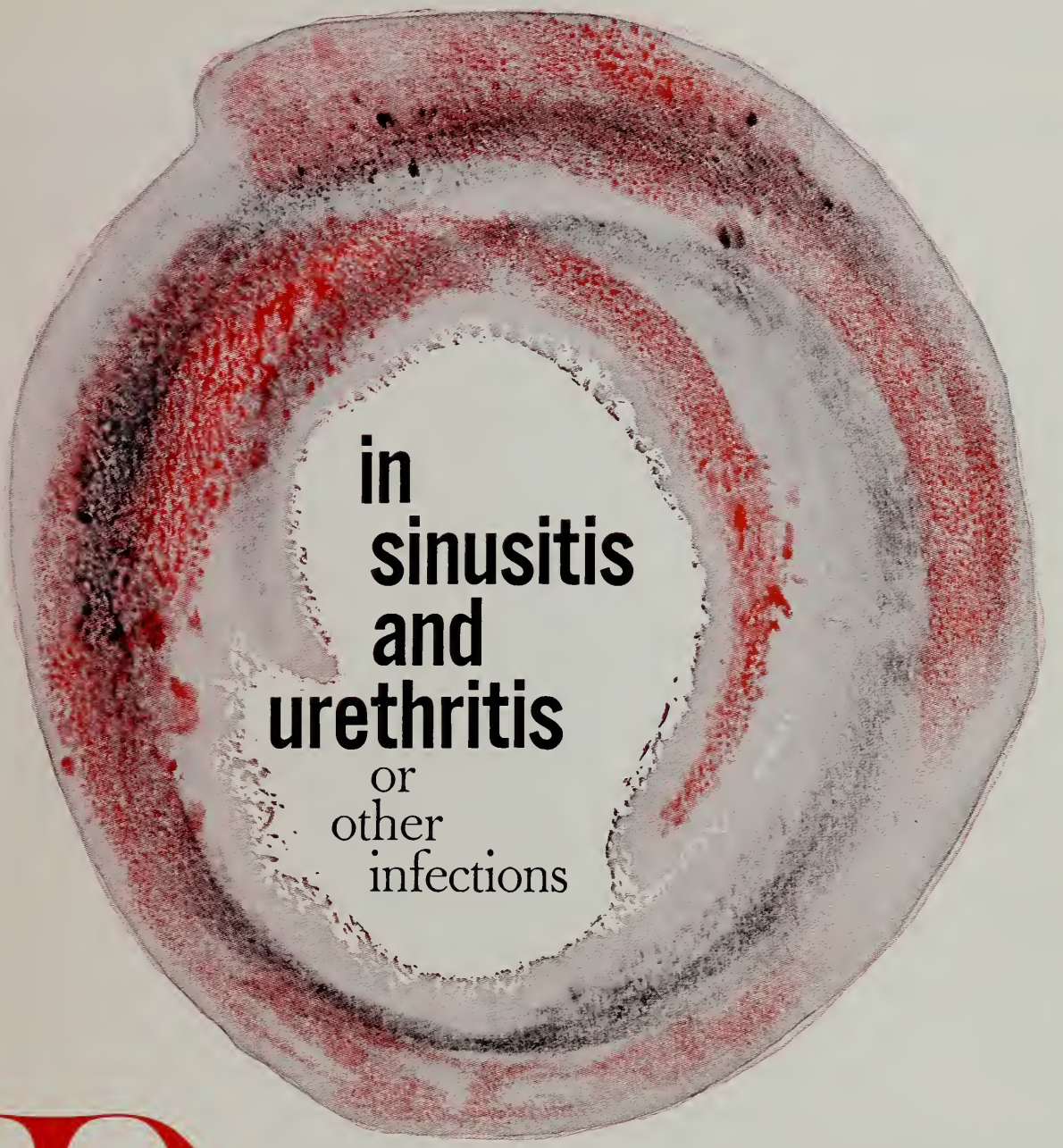
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PREPAREDNESS!



Nation to Mobilize for Emergency Health Care

If the United States suffered a major nuclear attack tomorrow, more than 45 million Americans would die, many needlessly! A prepared America, subjected to the same attack, would only lose about five million persons, and would have the capability to rise from the blow and successfully defend itself.

The combination of military might and an enlightened, prepared civilian population would make the U.S. a most risky target for a nuclear war. Not only would the aggressor receive swift and devastating retaliation from our reportedly superior nuclear armaments, but our civilian population could recover quickly for the ground war which must surely follow a nuclear exchange.

Military might and a prepared public—the two vital ingredients for survival!

The first ingredient has been achieved and is likely to be main-

tained; the second, a prepared civilian population, has been difficult to muster, due to almost universal public apathy and poorly defined and underfinanced leadership.

Now, however, big programs are underway to shake the country out of its civil defense doldrums. Public interest has been aroused by the Berlin crisis, the resumption of nuclear testing, and increased civil defense recognition from the administration and Congress. The time is ripe, defense experts say, to guide and gig Americans into protecting themselves.

Protection from the effects of nuclear warfare, while difficult to attain, is not as hopeless as commonly believed. Although persons caught within five miles of a 20 megaton hydrogen bomb burst (the largest economical size weapon) would die from blast and heat, only about 50 per cent of those within the next five mile radius would fall victim to these immediate effects. In the third five mile radius (10-15 miles from burst), only around 15 per cent would be killed by the explosion.

Prepare to Survive

Such mortality estimates must be further tempered by variables such as the size of the warhead, the height of the burst, local topography, aiming and performance errors, and effective defense. No one knows who will be in the "100 per cent kill" ring —so all must be prepared to survive the blast and heat damage—and be ready to cope with the next challenge to life—gamma radiation.

When the entire population of the nation is considered, gamma radiation is the greatest threat to survival. Coupled with the problems of caring for blast injuries, burn cases, and normal maladies and medical situations, the nuclear fallout phase of modern warfare creates an unusual challenge.

Period of Isolation

Families must seek protection from nuclear fallout as best they can, and must be prepared to exist in such isolation for an extended period, totally independent of outside assistance. The reorganization of medical services will be delayed by this period of isolation, and the provision of professional care to the casualty and non-casualty population will be slow to come.

Thus, the survivors of a nuclear attack must be taught how to live with gamma radiation, and how to provide health care for themselves during a prolonged period of medical austerity. If this level of education can be achieved, most experts feel confident that the vast majority of Americans could survive the terrors of modern warfare.

Medical Self-Help Training

The American Medical Association has officially recognized the need for training in medical self-help and has endorsed the development of such a program.

Work began on the program in 1959, and now the U.S. Public Health Services' Division of Health Mobilization, in cooperation with the AMA, is ready to launch a massive Medical Self-Help Training Program. With an ultimate goal of training 50 million persons, the project is slated to begin in the Spring of 1962, to be implemented and administered at the state level by governmental agencies, professional societies and voluntary health organizations.

Specific plans for the educational program were announced November 19-23 in Alameda, California, where the following Oklahoma representatives attended a Public Health Service briefing session: Gifford H. Henry, M.D., Chairman, OSMA's Disaster Medical Care Committee; Don Blair, OSMA staff; Tom Brett, Director of Oklahoma Civil Defense; Dave Steen, University of Oklahoma Extension Division; Major Charles Dutreau, (USA-Ret.), State Health Department; and, Henry Vaughn, State Board of Education.

The Medical Self-Help Training Program will be accomplished by the use of a special instructional kit, which is equipped and designed for instruction of groups of five to 25 persons. The complete program requires eight two-hour sessions. Everything necessary for both instructor and students is included in the compact, self-contained teaching kit.



Oklahomans attending the three-day indoctrination program on self-help training are pictured at the entrance to a model fallout shelter on the grounds of the PHS Western Instructors Training Center, Alameda, California. Left to right are: Kneeling—Tom Brett, Doctor Gifford Henry; Standing—Henry Vaughn, Major Charles Dutreau, and Dave Steen.



Pictured here is the Medical Self-Help Training Kit, with component parts on display. The course is taught with prepared lectures, supplemented by illustrative film strips. Oklahoma is scheduled to receive an initial issue of 45 of the $40 kits, with more to follow as the nationwide program gains momentum.

Twelve Subjects

Twelve subjects are covered in the complete course, as follows: Radioactive Fallout and Shelter; Hygiene, Sanitation, and Vermin Control; Water and Food; Shock; Bleeding and Bandaging; Artificial Respiration; Fractures and Splinting; Transportation of the Injured; Burns; Nursing Care of the Sick and Injured; Infant and Child Care; and Emergency Childbirth.

While it is preferred that the program be taught by professional people, the kit makes it possible for laymen to serve as instructors. Each kit is supplied with lecture material, printed lessons with illustrative slides, a slide projector and screen, student handbooks, test forms and reference material. The course material is simply presented, and is suitable for all Americans of junior high school age upwards.

Medical Supervision

An inherent feature of national and local implementation plans is the requirement of medical supervision throughout the training period. At the national level, the AMA's Council on National Security has participated in the development of the program, and at the state and county levels, medical societies will have authoritative roles in approving, sponsoring and supervising the instruction.

Tentative plans for Oklahoma call for the primary administrative responsibility to rest with the Oklahoma Civil Defense Office, which will establish policies as recommended by a professional advisory committee, the Oklahoma State Medical Association and the State Department of Health. Locally, county medical societies, county health units and civil defense officers will have primary responsibility for organizing and supervising the instruction.

It is also planned that the self-help program will be taught in a given area of the state only after the county medical society involved initiates a request. The society's civil defense or disaster medical care committee will then work with civil defense and county health officials in setting up and promoting the training program.

The OSMA Committee on Disaster Medical Care will meet this month to lay plans for implementing the program, plans which will very likely include an indoctrination meeting in January for all county medical society presidents and civil defense chairmen.

Center for CD Health Studies

Complementing the crash program of medical self-help training, and providing the continuity for a long-range emergency health care training program, is the University of Oklahoma proposal to establish a Center for Civil Defense Health Studies. The basic purpose of the plan, as prepared by the University's Extension Division in cooperation with Oklahoma Civil Defense, is to develop a prototype adult training program for the Department of Defense which will be suitable for use by other state universities across the nation.

Four Year Program

The proposal, now awaiting Washington's approval, calls for the development of an emergency health care training curriculum and the testing of it over a four year span by training some 3,000 Oklahomans. "Health Mobilization Teams" will be organized in every county of the state (one for every 10,000 population in urban areas) and they will be brought into OU's new $4 million Center for Continuing Education, where they will receive one week's training. Budget plans also include the provision of housing and meal service for the students.

Also planned is a professional training program, which will be developed in cooperation with appropriate professional societies. Such programs will be of shorter duration (1-3 days), and will be designed to keep the professions abreast of changing concepts of disaster medical care.

It is hoped that the teams and individuals thus trained can be kept active after they return home, thereby creating further dissemination of emergency health care information through the conduct of local courses. The Center for Civil Defense Health Studies will assist in such local instruction by providing educational materials and consultant service.

Training in medical self-help will

be integrated into the Center's curriculum, lending emphasis to the importance of the Public Health Service's Medical Self-Help Training Program, and providing the organization necessary to keep the program alive and up-to-date.

Grass Roots Training

University and Civil Defense officials believe the proposed OU program to be a valuable breakthrough in bringing disaster medical care instruction to the grass roots level. While complimenting the work previously done by the Public Health Service's three regional training centers, they feel the training has not effectively sifted down to the community level where it must be applied.

Through the pilot program in Oklahoma, other states may easily adapt the curriculum and teaching methods to existing adult education facilities.

Health Mobilization for Disaster Planning

Rounding out training plans for the state, and perhaps serving as a timely kickoff for the two major programs described above, will be the State Health Department's statewide conference on "Health Mobilization for Disaster Planning," scheduled to be held at OU's Center for Continuing Education, January 23-25, 1962.

In addition to completely setting up and demonstrating one of Oklahoma's eighteen 200-bed Civil Defense Emergency Hospitals (with simulated casualties), the three day meeting will feature an outstanding array of expert speakers, including Doctor Edward Teller, the father of the H bomb.

Topics for the program include: "H Day Oklahoma"; "Medical Self-Help"; "Care of Mass Casualties and Expanded Function Training"; "Circulating Stockpile"; "Chemical and Biological Warfare"; "Health Aspects of Nuclear Radiation"; and, "Behavior Expectations In Major Disasters."

One hundred persons will be especially invited to attend the meeting as "students," but several times this number may attend as observers. Chairmen of county medical society civil defense committees are urged to attend. Detailed program information may be obtained from the State Health Department, 3400 North Eastern, Oklahoma City.

Mass Shelter System

Another major development in civilian preparedness for nuclear disaster is the recent announcement that the Department of Defense is at long last establishing a nationwide fallout shelter system.

With the knowledge that Russia has already created an elaborate public shelter system, utilizing subways, existing structures and natural shelters, the Department of Defense has launched a three phase program to do the same for the United States. At the present time, specially trained fieldmen are surveying public and privately owned buildings in principal cities across the country to determine suitability and availability for conversion to public fallout shelters (each must safely accommodate fifty or more persons).

As soon as the survey has been completed and permission obtained from private owners, the structures will be modified, if necessary, and will be stocked with appropriate amounts of food and supplies.

The target date for completing the project was originally set for December, 1962, but work has been accellerated to the extent that it should be completed by June or July. □



The University of Oklahoma's $4 million Center for Continuing Education, located south of the main Norman campus will be the training site for the proposed emergency health care training program, and headquarters of the Center for Civil Defense Health Studies. The twenty acre complex is a complete adult education city, containing classrooms, housing and food service facilities.

OSMA Financial Aid to Education Plan

A plan of financial aid to residents of the State of Oklahoma attending the University of Oklahoma School of Medicine will go into actual operation with the class now being assembled for admission to the first year courses beginning in September 1962.

The House of Delegates of the Oklahoma State Medical Association in May 1961 adopted the recommendation of the Council on Professional Education to raise the annual dues of the Association by $5.00 per year per member to finance a student aid program.

The instructions of the House of Delegates provided for the immediate past-president of the Association to "advise and counsel" the University of Oklahoma School of Medicine in the distribution of funds to be made available. To aid in perfecting the mechanics of the plan, a committee has been formed, consisting of two additional past presidents, the acting president and the president-elect of the Association. This committee has met with Dean Everett of the Medical School and Doctor Phillip Smith, Associate Dean of Student Affairs. With the able help of these administrators and with the counsel of Mr. Roy C. Lytle, as attorney for the Association, it has been determined that five outright scholarship grants for academic excellence will be offered to the incoming class at the medical school. These five scholarship grants will be outright awards in the amount of $500.00 each to cover a year's tuition at the medical school for an Oklahoma resident.

There will be sufficient funds to make available loans up to a maximum of $500.00 per year per applicant for probably twice the number of scholarship awards.

At the present time, there is also hope that the amount of money to be realized from the dues increase will provide for a certain amount of emergency grant-in-aid awards to cover emergency situations.

Inasmuch as the income from the increase in dues will not be available until after January 1, 1962, it will not be possible to make loans before the beginning of the fall semester in September 1962.

Application forms have been compiled and printed and are available on request to the office of Phillip Smith, Sc.D., Associate Dean of Student Affairs, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma. The scholarship awards will be recommended by the Admissions Committee of the medical school and final approval will be rendered by the Financial Aid to Education Committee of the Oklahoma State Medical Association. It is expected that these scholarship awards will be determined during the months of December 1961 and January 1962 as the membership for the freshman class for next year is selected. Applications for loans will be processed directly through Doctor Smith's office for action by the Financial Aid to Education Committee.

On the basis of study of aid-to-education plans operated by other organizations, the Committee feels that security for loans should be furnished by the student in the form of life insurance to cover the amount of the loan granted. The Committee stands ready to aid the student in obtaining certain low cost life insurance for this plan if such help is needed. As recommended in the original action by the House of Delegates, the repayment of money loaned by this fund shall begin within five years after graduation from medical school and shall be repaid within three years of the beginning of repayment. The amount of money loaned starts bearing three per cent interest annually beginning one year after the borrower graduates from medical school.

The actual disbursement of funds will be made by the Business Staff of the University of Oklahoma Medical Center from funds on deposit as furnished by the Oklahoma State Medical Association for this specific financial aid plan. Authority for disbursement or withdrawal of funds will be maintained by the Financial Aid to Education Committee designee.

Committee Chairman, Walter E. Brown, M.D., has expressed hope that this plan, as outlined, will give the authorities at the medical school ample latitude to indicate the most meritorious loan applications and the scholarship awards that will attract the better students to the school. A complete report on the progress of this operation will be made to the House of Delegates at the annual meeting in Oklahoma City in May 1962. □

Mercy Hospital Heart and Research Institute

has cytologic and autoradiographic facilities for differentiation of gastric lesions. This diagnostic service is free of charge to patients with demonstrated gastric lesions.

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Oklahoma City, Oklahoma

Regional Postgraduate Courses Underway

The Oklahoma State Medical Association's 1961-62 regional postgraduate education series got off to a good start on November 14th and 28th when nearly one hundred physicians registered for the first two of eight decentralized meetings held at Bartlesville's Elks Lodge and at Oakwood Country Club, Enid.

Planned by the OSMA's Postgraduate Education Committee, R. R. Hannas, M.D., Sentinel, Chairman, the Bartlesville meeting was under the local direction of Elvin Amen, M.D., committee member from Bartlesville, and the Enid meeting was arranged by Clarence R. Roberts, Jr., M.D., Enid.

Bartlesville Meeting

Registrants from nine counties and Kansas assembled at 4:30 p.m. for the Bartlesville presentation on "The Liver." Leading off the program, three instructors from the University of Oklahoma faculty, G. Rainey Williams, M.D.; Jack D. Welsh, M.D.; and J. William Hood, M.D., discussed new aspects of anatomy, metabolism, and hepatic function. Other subjects presented were "Jaundice During Pregnancy," "Liver Disease in Childhood," and "Surgery in Liver Disease," followed by a problem case conference.

Attending the Bartlesville meeting were: Bernard E. Guenther, M.D.; W. D. Putnam, M.D.; C. N. Clifton, M.D.; John E. Highland, M.D.; Rex M. Graham, M.D.; O. L. Hill, M.D.; Earl M. Lusk, M.D.; R. W. Loy, M.D.; R. C. Gentry, M.D.; James G. Hughbanks, M.D.; W. T. Wright, M.D.; R. W. Daugherty, M.D.; Jess D. Green, Jr., M.D.; George R. Kennedy, M.D.; F. S. Etter, M.D.; Charles A. Carmack, M.D.; H. E. Denyer, M.D.; Wendell L. Smith, M.D.; John R. Reid, Jr., M.D.; John E. Scott, M.D.; V. Lee Vinyard, M.D.; Vernon M. Lockhard, M.D.; A. M. Mery, M.D.; Camp S. Huntington, M.D., Cody Ray, M.D.; John Gilbert, M.D.; George Moore, M.D.; Harold H. Jones, M.D.; M. D. Fox, M.D.; William Van Pelt, M.D.; C. L. Johnson, M.D.; L. B. Word, M.D.; E. E. Beechwood, M.D.; Elvin Amen, M.D.; R. R. Hannas, M.D., Ed A. Brashear, M.D.; F. C. Wallingford, M.D., R. G. Allen, M.D., and John R. Smithson, M.D.

Enid Meeting

The subject for the Enid meeting, in keeping with the series concept of exploring basic science, diagnostic and therapeutic aspects of principal organ systems, was "The Lung." Presenting the four hour program were O.U. faculty members Charles M. Harvey, M.D.; Gilbert S. Campbell, M.D.; Harold G. Muchmore, M.D.; and Warren L. Felton, M.D. "Pathophysiology of Emphysema," "Respiratory Acidosis," "Recent Advances in Viral Respiratory Diseases," and "Surgical Complications of Pulmonary Infections," were topics for the period preceding dinner. After dinner, a problem case conference was presented.

Representing seven counties and Kansas, registrants for the Enid meeting were: C. Riley Strong, M.D.; D. L. Mathews, M.D.; C. R. Roberts, M.D.; Lillian Robinson, M.D.; Mark Holcomb, M.D.; B. D. Dotter, M.D.; Neil R. Morrow, M.D.; Kendall M. Beckman, Jr., M.D.; Avery B. Wight, M.D.; J. W. Murphree, M.D.; H. H. Jones, M.D.; Robert Herlihy, M.D.; Alfred M. Shideler, M.D.; Paul Champlin, M.D.; Robert J. Terrill, M.D.; Hope Ross, M.D.; Cody Ray, M.D.; John X. Blender, M.D.; Charles J. Roberts, M.D.; George S. Wilson, M.D.; James F. Tagge, M.D.; Joseph Stafford, M.D.; W. J. Buvinger, M.D.; F. Reef, M.D.; B. J. Cordonnier, M.D.; Earl M. Robinson, M.D., Frank L. Adelman, M.D.; Marion E. Sheets, M.D.; George Ross, M.D.; R. R. Hannas, M.D. and C. G. Stephens, M.D.

Other Meetings

On December 5th, the third meeting of the series, "The Kidney," was held at George's Steak House, Chickasha, under the local direction of B. C. Chatham, M.D. A full report, including the list of registrants, will be published in the January *Journal.*

Clinton-Sherman Air Force Base, Burns Flat, will be the site of the fourth regional postgraduate program ("The Liver") on December 19th.

Rounding out the 1961-62 series of refresher courses will be the following: January—Ardmore ("The Kidney"); February—Ada ("The Colon"); March—Western Hills Lodge ("The Colon"); and, April—Miami ("The Lung").

Registration fee for all meetings is $7.50 (includes dinner). □

OSMA Hosts Students

Nearly three hundred OU medical students and wives attended the November 3rd Student American Medical Association banquet, held annually for the student group by the Oklahoma State Medical Association.

A capacity crowd filled Oklahoma City's Petroleum Club Auditorium, where students and hosts enjoyed a buffet dinner and heard an inspiring address from Milton Davis, M.D., Dallas thoracic surgeon and national officer of the newly-formed American Medical Political Action Committee.

"Our enemies (those favoring various forms of social legislation) are not necessarily bad people," Doctor Davis said, "since they sincerely believe they are doing the right thing, and we must all uphold their right to feel and do as they wish." He added, however, "the real problem lies in the fact that the vast majority of Americans who do not want federal dependency, are neither expressing their views nor being fairly represented in the legislative halls."

He said it was time for the voice of the majority to be heard, that the legislative influence of the social reformers was out of proportion to the number of Americans they truly represent. The conservative element of the public, Doctor Davis added, is like a sleepy rhinocerous, whose tough hide is getting more and more sensitive to the pricks of the fiscally irresponsible spenders. □

Dues Hike for '62

Both the Oklahoma State Medical Association and the American Medical Association will increase annual dues for the first time in more than ten years, beginning January, 1962.

OSMA dues will take a slight hop from the present $42 annually to $47. The increase was approved by the House of Delegates at its 1961 annual meeting for the purpose of financing a scholarship, grant-in-aid and loan program for University of Oklahoma medical students.

Plans are now being developed by OSMA Past-President Walter E. Brown, M.D. and his Financial Aid to Education Committee to implement the Delegates' directive. The increase is expected to raise some $8,000 annually, to be split between scholarships and grants ($3,200) and loans ($4,800). See November OSMA *Journal* and article on page 648.

AMA will increase its current $25 per year rate by $10 in 1962 and by an additional $10 in 1963. After January 1, 1963, the total AMA dues will be $45 per year.

Monies derived from the dues hike will be used to inaugurate or expand the following programs:

- Financial assistance to medical students (AMA will soon offer 50 national medical scholarships and will establish collateral fund to back up bank loans to students).
- Continuing education for practicing physicians.
- Health advice to the lay public.
- Medical Research.
- Expansion by the Communications Division of its program of faithfully portraying the image of the AMA.

AMA officials point out that only 21 per cent of its budget is now derived from dues, the rest from earned income (over 50 per cent from advertising revenues).

In its recommendation to the House of Delegates (1961 annual meeting) the AMA Board of Trustees said it believes that "members of the AMA should accept a larger part of the responsibility for financing the programs of AMA."

The dues increase will bring about a better balance between monies received from physicians and monies received from other sources.

The house reference committee on miscellaneous business said it examined the AMA budget in detail and heard extensive testimony by the chairman of the board, the executive vice-president, and director of the business division. It reported that "a review of the reorganization of AMA headquarters, which effected many savings and resulted in increased efficiency" was included in the testimony. The Committee said it was "deeply impressed" with the dispatch of the reorganization.

Membership dues first were established by action of the house in 1848 in the amount of $3 a year. From 1912 through 1949 there were no dues. Since 1950 the dues have been $25.

In recommending increased dues, the board said such consideration should take into account the basic purposes of the AMA as stated in its constitution as that of promoting the science and art of medicine and the betterment of the public health.

"Implicit in this constitutional statement of purpose are the association's responsibilities for providing service to its constituent associations and their components and—through them—to the physicians of America," the board said. It then added:

"The programs, past, present and future—which are designed to carry out these purposes should meet two tests:

"They should be sufficiently broad in scope, varied in approach, and deep in resources to permit the association to achieve its purposes in a world in which the practice of medicine is becoming increasingly difficult and complex.

"Since these are programs of American medicine, their financing is the primary responsibility of physicians, and, therefore, their contribution should be the largest single source of financial support."

The board also pointed out that the expansion of some of the AMA programs through the use of increased dues will do much to discredit the attack on American medicine which has become increasingly strong in recent years.

"These attacks are well financed," the board said. "Medicine's challenge to these attackers must be equally well financed." □

M.D.'s Encourage Future Doctors

Using an OSMA-produced folder entitled "Picture Yourself As A Future M.D.," physician counselors to Oklahoma high schools are now at work to encourage top students in the pursuit of medical careers.

The program is called Medical Education Encouragement, and is designed to attract the best possible students into the field of medicine, with particular emphasis on the University of Oklahoma School of Medicine. A product of the Medical School Liaison Committee, chaired by Gregory E. Stanbro, M.D., Oklahoma City, the project received enthusiastic support from the House of Delegates at its 1961 annual meeting, and was later incorporated into President Clinton Gallaher's Five-Point Program for the 1961-62 organizational year.

OSMA's Board of Trustees members assumed responsibility this Fall for the appointment of physicians within their respective districts to serve as vocational advisors to the high schools. Upon receipt of the advisors' names, the association Executive Office is supplying the physicians with quantities of materials for use in counseling members of highschool science and pre-med clubs.

In addition to the OSMA folder, physician counselors are receiving a packet of information from the American Medical Association.

"American Medicine is losing ground to industry in the race for top talent," Doctor Stanbro reports, "and we are hopeful that Oklahoma physicians will get behind the Medical Education Encouragement Program and assist in attracting the necessary quantity and quality of students into the field of medicine." □

Poison Information . . .

(Continued from Page 616)

be the duty of the chemist and secretary to keep the Poison Information cards up to date and to make up new sets of cards as needed, to accept calls and carry on the routine procedure of the Information Center under the direction of the State Commissioner of Health and the State Health Department Laboratory Director.

The State Health Department Laboratory Director, and the staff of the State Health Department Laboratories would be available and would participate in the Poison Information Center services, including analytical procedures. According to present plans, the Poison Information Center would be conducted with a staff of medical consultants and with the cooperation of the University Medical Center Department of Pediatrics. A duplicate set of poison information cards would be established in the Department of Pediatrics at the University Medical Center.

Under the very able and capable guidance of Dr. Shoemaker, the Poison Information Center was established and we hope that the work he started can be continued and expanded to include certain analytical services that have not been uniformly available in the past and to provide local centers at several localities in the State.

Our problem at this time is financing but we hope that this can be worked out until such time as the Oklahoma State Legislature has an opportunity to make an adequate appropriation to support this service.

This letter would not be complete without giving due credit to physicians throughout the State for their active interest to continue the Poison Information Center. This obvious desire of the physicians to lend their aid and support to this program has greatly influenced the plans to continue the operation of the Poison Information Center.

When plans are completed, the state association will be advised.

Sincerely,
KIRK T. MOSLEY, M.D.
Commissioner of Health

* * *

November 13, 1961

To The Editor:

I have just read the editorial on the Poison Information Center in the current *Journal.*

When the matter of the closing of the Poison Information Center came up in September, Dr. Shackleford of the State Health Department got in touch with the Tulsa hospitals and a meeting was called in our hospital to which representatives of the other hospitals were invited. However, we were the only ones who were interested in establishing a Poison Control Center. Dr. Walter Sethney, one of our pediatricians, had already established two informal poison control centers in St. John's and Hillcrest, but nobody knew much about it. Since I personally am interested in medico-legal problems, I was very enthusiastic about establishing such a center and in the following weeks information was obtained about such centers, correspondence maintained with Dr. Shackleford and as a result of all this, we have only a week ago learned that the Oklahoma State Health Department has approved our hospital for the maintenance of such a center. This is now quite official with the knowledge and approval of the United States Public Health Service. Dr. Walter Sethney will be the director and I will be the co-director of this center, and we had a committee meeting last week in which details were discussed. Members of this committee, in addition to Dr. Sethney and myself, are the chief pharmacist, the Ph.D. chemist of our Department of Pathology, who is going to serve as our toxicologist, representatives of the administration, the nursing staff, the record room, the County Health Department, the director of graduate education, the Tulsa Safety Council, and the executive secretary of the Tulsa County Medical Society.

Since we have the facilities, not only for information but also for treatment and diagnosis, this will be a Poison Control Center rather than a mere information center. We have already received all the file cards which are distributed from Washington through the National Clearing House for Poison Control Centers and we will be in business within a few days with separate telephone, room, files, etc. This is not meant to be a center for the entire state, but at least for our area. However, I would appreciate it if you would put a notice of the formation of the Center in the *Journal* of the Oklahoma State Medical Association. We would like to emphasize that in contrast to the Poison Information Center in Oklahoma City we are not answering calls for information from the lay public, but only from physicians, which is what is recommended nationally.

In going through the list of poison control centers in the United States, I have noted that Kansas lists ten such centers, Texas, nineteen, and Missouri five, to mention only the neighboring states. Arizona has as many as twenty-one, Arkansas has two, and Oklahoma could have been the only state without any if we had not gotten ours. There appears to be an additional center in the offing in Ponca City, but I am not certain whether they will be official or not. The Hillcrest Poison Control Center will be duly listed in the directory of the National Clearing House of Poison Control Centers in Washington.

We will attempt to reach all physicians in our area and in addition, will have a program for public education which will be conducted with the help of the Tulsa Safety Council. I also propose to officially notify the Oklahoma State Board of Medical Examiners of this facility so that they can let the new physicians know about it when they receive their licenses.

Any suggestions you may have for further publicizing this Center will be appreciated.

Sincerely yours,
LEO LOWBEER, M.D.
Chief Pathologist

OSMA JOURNAL / *deaths*

HORTON E. HUGHES, M.D.
1907-1961

Horton E. Hughes, M.D., 54-year-old Shawnee surgeon, died at his home, November 7, 1961.

Born in Shawnee, June 3, 1907, Doctor Hughes took pre-medical training at Oklahoma Baptist University and graduated from Northwestern University Medical School in 1930. After serving his internship at the University of Maryland in Baltimore, he took a residency in surgery at Passivant Hospital, Chicago. Returning to Shawnee, he estabilshed his practice in general surgery.

Active in the medical field, Doctor Hughes held a membership in the American College of Surgeons, was President of the Oklahoma chapter of the International College of Surgeons, and a member of the American Proctological Society.

While serving in the Army Medical Corps during World War II, he activated the 15th Station Hospital at Tavistock, England in 1943. Doctor Hughes' interest in civic affairs included his membership in Shawnee's Rotary Club.

He was the son of the late J. E. Hughes, M.D., one of the founders of the ACH Hospital in Shawnee. □

CD Film Catalog Now Available

The American Medical Association's Council on National Security has recently compiled and published a catalog of emergency medical care films for use by state and county medical societies. It may be ordered from The Council, 535 N. Dearborn Street, Chicago 10, Illinois.

The reference book, designed to assist physicians in organizing and preparing for a natural or man-made disaster, provides all information necessary to either borrow or buy more than one hundred carefully selected training films. □

Doctor Turner Receives Medal

The Seale Harris Medal was presented to Henry H. Turner, M.D., Oklahoma City endocrinologist, by the Southern Medical Association at its annual meeting, October 6-9, at Dallas, Texas.

The Seale Harris Medal is an award for recognition for important research accomplishment in the broad field of metabolism, endocrinology, nutrition, or for research which contributes to a better understanding of the chemical changes occurring in disease.

Doctor Turner was recently honored with a special certificate of recognition for outstanding contributions and service to The Endocrine Society in June, 1961. (August, 1961 issue of *Journal.*)

Long active in medical circles, Doctor Turner has served as President of the Oklahoma State Medical Association, President of the National Society of Nuclear Medicine, President of the American Therapeutic Society and has served as Secretary-Treasurer of the Endocrine Society since 1941. □

MISCELLANEOUS ADVERTISEMENTS

SOUTHERN OKLAHOMA group desires young general practitioner for association, leading to partnership. Write Key B, The Journal, P.O. Box 9696, Oklahoma City, Oklahoma.

PHYSICIAN EXPERIENCED in general practice, insurance and industrial work wishes opening in solo or group practice, school, industrial, institutional or government work. Contact Key F., The Journal of the Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

G.P. WANTED: General practice clinic in Oklahoma City metropolitan area. Salary plus percentage. Give training, experience and religion first letter. Box 183W, Oklahoma City, Oklahoma.

LOCATION WANTED: Graduate of Georgia, 1958, 31 years old, married, have completed three years of approved residency in OB-GYN, presently serving as Chief Resident at Baroness Erlanger Hospital, Chattanooga, Tenn. Contact Robert J. Henderson, Jr., M.D., 3632 Weldon Drive, East Ridge, Tenn.

DESIRE LOCATION in OB-GYN, available July, 1962, board eligible, age 28, married. Contact Gregory A. Green, M.D., 1923 South Utica, Tulsa, Okla.

WANTED PARTNER or associate, with chance to eventually retire, for general practice in city. $20,000 income, average daily load 15-20, same location for 20 years. General practitioner, either recent graduate or middle age, who could do O.B. and minor surgery would do well. All records available. Mary Edna Sippel, M.D., 308 Utica Square Medical Center, Tulsa 14, Oklahoma.

GENERAL PRACTITIONER wanted. Hollis, Oklahoma, County seat of Harmon County, wants general practitioner. Physicians interested in this Southwestern Oklahoma opportunity should contact the President of the Chamber of Commerce, E. A. Story, Route 4, Hollis (MU 8-2703.).

FOR SALE at bargain prices: lensometer (A.O.), projector (B & L), two opthalmoscopes (A.O.), sterilizer, perimeter, spot lamp, cuspidor, treatment cabinet, treatment table and treatment chair. Contact Mrs. J. J. McDonald, 4734 Dartmouth, Bartlesville, Oklahoma.

PHYSICIAN doing internal medicine desires to dispose of practice. Office located in prominent medical building in town of over 100,000 population in Oklahoma. Contact Key L, Oklahoma State Medical Association, P.O. Box 9696, Oklahoma City, Oklahoma.

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Zuhdi, Nazih, M.D., McCollum, W. T., M.D., Donnell, John, M.D., Robbins, Galen, M.D., Honick, Gerald, M.D., Greer, Allen, M.D., Carey, John, M.D., Kraft, David, M.D., Open Heart Surgery in a Private Hospital: Clinical Experience with 127 Cases (S) 438

A pre-holiday lull? Oklahoma members have been unaware that such a lull supposedly exists in Auxiliary activity. The Oklahoma City Fall Clinical and Fall Conference were held the last week in October; following a week later, Southern Medical convened in Dallas (Oklahoma's triumphant participants are listed below); and Thanksgiving week-end found many in Denver attending AMA sectional sessions.

In addition to attending these regional events, many Oklahoma doctors and their wives entrained and enplaned in every direction for specialty meetings from coast to coast.

CONFERENCE AND CLINICAL

Mrs. Pat Fite, Sr., State President, conducted the annual Fall Conference, October 23, at the State Medical Building. Registration and coffee were followed by the regular meeting. Reports were presented by Mrs. Fite; Mrs. Milton L. Berg, President-Elect; state officers and chairmen; and county presidents. Mrs. J. Hutchings White of Muskogee was named Secretary, following the resignation of Mrs. Charles W. Freeman, Oklahoma City.

Fall Conference annually presents a two-fold opportunity for officers and chairmen: meeting and becoming better acquainted with co-workers (Post Convention School of Instruction provides their initial meeting); and reporting and discussing progress in business and state projects. Luncheon at the Thunderbird concluded the conference.

Out of This World, the theme of the luncheon and style show planned by the Oklahoma County Medical Auxiliary hostesses, was appropriately descriptive. Mrs. Turner Bynum, chairman, and her committee combined a sparkling musical program, a lovely luncheon, and a scintillating collection of fashions modeled by local members. All Clinical programming was well attended and enthusiastically appreciated by the guests.

PLAUDITS FROM S.M.A.

Our State Auxiliary congratulates Mrs. Elias Margo, Oklahoma City, President-Elect of the Woman's Auxiliary to the Southern Medical Association. Mrs. Virgil Ray Forester, past State President, was elected Councilor to Southern and was appointed to the Nominating Committee for 1961-62. Oklahoma is proud of its excellent representation and wishes Mrs. Margo and Mrs. Forester a successful and rewarding year.

In the last issue of *The Sooner Physician's Wife,* we listed some of the many ways Tulsa County honored their doctor husbands for Doctors' Day and stated that they would surely be winners again this year. Tulsa County received the Feldner *Sweepstakes* Trophy, appropriately engraved, and filled with red carnations. This trophy is annually awarded "to the county auxiliary submitting the best overall Doctors' Day observance, regardless of size of membership." How happily we congratulate Tulsa County for their work and for their rewarded effort.

Oklahoma received another singular honor: the State Doctors' Day Exhibit, presented by Mrs. Forester, was awarded the $10.00 prize as the "best overall visual exhibit." Seventeen states and Washington, D.C., participated in the 1961 Doctors' Day observance. These awards should remind each county chairman that March 30th comes quickly each new year, and it is not too soon to begin plans for your 1962 observance. State Doctors' Day Chairman is Mrs. Floyd Bartheld, 530 Creek Street, McAlester.

From each Auxiliary member, to each Auxiliary member:

May the True Holiday Spirit
enter your heart and your home. □

OSMA JOURNAL / *the last word*

1962 County Society Officers, including Delegates and Alternates to the OSMA are due at OSMA headquarters by January 1. Present county officers are urged to report these names immediately, since several OSMA programs require accurate liaison with component societies. Also, the Speaker of the House of Delegates must select his annual meeting committees from the list of certified Delegates.

"America—Beware of the Welfare State." Leading British economist Graham Hutton describes Britain's economic plight in the October Reader's Digest. Hutton points out the snowballing abuses of the social insurance system and the program's negative effect on politics and the people. Projecting a similar system to the U.S., he says it "could paralyze a mature industrial society . . . " Good ammunition to give to your patients, since it takes a sharp crack at compulsory health insurance. The AMA purchased large quantities of reprints of this important article, which may be ordered from F. J. L. Blasingame, M.D., Executive Vice-President, 535 N. Dearborn Street, Chicago 10, Illinois.

Fifth Annual Citizenship Seminar, sponsored by Oklahoma Christian College, is scheduled for Oklahoma City's Skirvin Hotel, February 6, 7, 8, 1962. Communist deceit and collectivist philosophies will be exposed by nationally recognized speakers. Emphasis will be placed on the importance of education in the future of our nation. Good opportunity for county medical societies to sponsor local teachers' attendance. Registration fee (not to include housing or meals) is $35.00. Further information may be obtained from Doctor James O. Baird, President, Oklahoma Christian College, Route 1, Box 141, Oklahoma City.

General Practice or Specialty Opportunities? The physician placement service of the OSMA Executive Office tries to keep tab on practice opportunities within the state, referring them to qualified physician inquirers. If you have such an opportunity, or know of one, please send particulars.

Annual Meeting Program Chairman Rex Kenyon, M.D. has announced firm commitments from eight guest lecturers for the May 5, 6, and 7th event: Robert A. Aldrich, M.D., University of Washington School of Medicine, Seattle (Pediatrics); Irving M. Ariel, M.D., Pack Medical Group, New York City (Surgery); Claude C. Craighead, M.D., Clinical Associate Professor of Surgery, L.S.U., New Orleans (Surgery); James H. Ferguson, M.D., Professor and Chairman, OB-GYN, University of Miami (OB-GYN); Willard E. Goodwin, M.D., Chief of the Division of Urology, University of California Medical Center, Los Angeles (Urology); Robert Kierland, M.D., Professor of Dermatology, Mayo Foundation Faculty, Rochester (Dermatology); Lawrence J. McCormack, M.D., Cleveland Clinic, Cleveland, Ohio (Pathology); and Malcom H. Stroud, M.D., St. Louis, Missouri (Ear-Nose-Throat).

Executive Office of the Association is now closed Saturdays to compensate for the evening and weekend work of the peak season.

Personals. J. R. Stacy, M.D., Oklahoma City Orthopedist, is Legislative Chairman of the American Association of Physicians and Surgeons . . . Stewart G. Wolf, Jr., M.D., Department of Medicine head, OU Medical School, has been appointed to the National Heart Council.

MEETINGS

December 19	OSMA PG Course ("The Liver") Burns Flat
January 10	OU Short Course (Pediatrics)
January 30	OSMA PG Course ("The Kidney") Ardmore
February 5, 6	Oklahoma Chapter, AAGP, Tulsa
May 5, 6, 7	OSMA Annual Meeting, Oklahoma City

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DECEMBER 1961

A TREND TOWARD MEDICAL ADMISSIONS

This study reveals the trends in hospital admissions for the calendar years indicated. They are divided into three main categories. Since Blue Cross is the largest single prepayment agency in Oklahoma, these statistics have substantial significance.

YEAR	Paid Cases	Average Days Paid Per Case	Cases Paid Per 1000 Members
MEDICAL*			
1951	19,847	6.6	54.0
1956	26,927	6.9	58.4
1960	36,482	7.5	72.6
SURGICAL			
1951	23,088	6.5	62.8
1956	31,051	6.1	67.2
1960	35,069	6.8	69.7
OBSTETRICAL			
1951	9,067	5.8	24.7
1956	9,986	5.0	21.6
1960	9,595	4.9	19.1
TOTAL			
1951	52,002	6.4	141.5
1956	67,964	6.3	147.2
1960	81,146	6.9	161.4

* "Medical" cases are all cases that are not Surgical or OB-Gyn. They do include TB and Mental and Nervous cases, which comprise only 5.8% of the total "Medical" admissions.

ANALYSIS.....

1. Medical "Cases Paid Per 1000 Members" are now greater than either Surgery or OB....in fact, that factor rose 24% in the last 4 years, while Surgical cases rose 3% and OB cases dropped 10%.
2. The "Average Days Paid Per Case" (Length-of-stay) of Medical cases rose by .9 days since medical payments have been available in the hospital (1951)....Surgery dropped, then rose again....OB has steadily declined.
3. Medical admissions cost Blue Cross an average of $14.12 more per case than the statewide average of all cases, because Medical admissions are .6 days longer than the state average length-of-stay ....that's 60% of $23.54, our average daily cost in 1960.
4. Numerically, for the first time in 10 years, we are now paying for ("Paid Cases") more Medical admissions than any other category.... and at the highest cost per type of case (see #3).

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